

#6

SEQUENCE LISTING

<110> POLONSKY, KENNETH S.  
HORIKAWA, YUKIO  
ODA, NAOHISA  
COX, NANCY J.  
HANIS, CRAIG L.  
BELL, GRAEME I.

<120> METHODS OF TREATMENT OF TYPE 2 DIABETES

<130> ARCD:307

<140> UNKNOWN

<141> 1999-10-21

<160> 30

<170> PatentIn Ver. 2.0

<210> 1

<211> 49136

<212> DNA

<213> Human

<400> 1

ctgcagaaaa	acagcttcaa	tgtgaccatc	cttgatagtc	cgaggctgag	taaaatggcc	60
tgaggaggca	aaatctgaaa	agctctatta	ggtggcaaac	tgctgtcact	agaagagttg	120
aggccccctt	ctcctcccc	gcctgaccgc	cttcattcct	gggaatggaa	caggttcttg	180
gggcaagggg	gaatcctcga	gcaggcccc	ggatcactat	cctcacctcc	ccgcggcact	240
gaatggctat	agctgtaaat	gtgcgtccac	ggggtcactg	tccagccacc	aggaccaggt	300
gcctggccat	ctggggaaatc	ggaaaacgct	cagcgggatg	ctctggccac	ctccccctgcc	360
ctcagttaag	atgtagagcg	ttcaacctaa	aatgcctaga	aacaaagccc	aggccccgga	420
aggtcgaacg	agtgcgacgc	cgctccctca	agctcttccc	tcggagccgt	ctcatttccc	480
aaaactcccc	aacacatcac	agagagaggt	gttgagccag	gtggtcactc	ccttttccag	540
aaccacagca	agaagttgag	cctgctgggc	tcctaacgaa	ggccctgggg	cccgggtggga	600
tgaaaagccc	tattaggtag	caaacagctg	tcactagagg	ggttgaggcc	cccttctccc	660
ctgcctgacg	acgacggcgg	caggaactcg	accggcgccg	gacagctcgc	aacttgccct	720
accaagcgta	aatctcgggt	cctcccaact	acccgcggcc	acggcctccg	cagcagagcg	780
ccggaagcag	agacgcgttt	cgggaggaag	gtgcatgctg	ggagcggcgg	cgcatgctgg	840
gagctgtagt	ctgcgacgca	actcggccga	ggtggctccc	tggtccctga	agctcccaga	900
gcccgcgtgt	tcaggcggtc	ccgacacccc	ggcccagacc	tcaccggctg	gaggactgaa	960
cgctcgccgg	ccctccgggt	atgagcggag	gccgggatag	ccctgggctc	cgccgcccc	1020
ggaaggaaaa	aatacagtgc	ggtccgcgcg	ccgaccacga	aagagcggag	ctcgggagcc	1080
ccgccccctg	ggcctccgac	gtccgtggcg	ctttccgtcg	cgcgagtgcg	attgggccc	1140
ctgtcacgtg	accagagacc	ccacgcccgg	ttggctgccg	cctggttacc	aatgggagac	1200
tagcggggcg	gcgtactggc	ctgggtccagc	acctgcgggg	ccctcgggct	tggagggctg	1260
ggccggggcg	ggaacggggc	ggcgggggcg	gaggcggcgg	cggtgactc	gccttctctc	1320
cggggctgcg	accccgaggc	aaccggctgc	agatgggagc	ccgcggagcc	gaggatgcgg	1380
gcggggccggg	gcgcgacgcc	ggcgaggagag	ctgttcgggg	acgcgcctt	ccccgcccg	1440
gactcctcgc	tcttctgca	cttgtctacg	ccgctggccc	agttccgcga	ggacatcacg	1500
tggaggcggc	cccagggtggg	gccgtgtggg	gtgcggtggg	cgccgtttct	ggtttctgag	1560
atctccgctc	ctcgcaggga	gcggggcggg	gtggggcgcc	agggtagctc	cgaacgcagg	1620
gtccgcggtt	gttctctc	gaagtgggcg	cccgcccc	tcttttcgta	cctccttcat	1680
accccgcccc	agaacgagca	ggactcggcg	ctaccctaag	gacgctaacc	taggtcgtgg	1740
cctccgcctg	cgagagctcc	aatccaggag	gctcagagcg	ctgcgagagg	cgttttaaca	1800
gagccccaaa	accccgcccc	acctgtttgc	tttcgccttg	aagagcggtt	gtgtctgctc	1860
ctccgcgaga	gaggggccgt	cgtgcccctc	tgaagtggct	aggccgagcc	cacaaagcaa	1920
agcgtgatag	aatttcagtt	ttggattttg	tgcacctgcc	tttccagttg	taacacctag	1980
aaatggcacc	tccaagggat	gccctggcgg	agtgtgtgtg	tcatattttt	agaaatgggt	2040
tatctgctga	ataagactgc	ccaagggagc	aaccttgccc	taagtggatg	cggtcttagc	2100

0976337.051701

ggagacaact	gatggccgcc	agtcttcgaa	cagagctgga	acttctgggc	tctcgtgact	2160
gagatggcct	tgacaggcca	cctgggtttcc	ttggacaaca	ctgaagggcc	tgggaggagg	2220
caagggctcag	accatgtaga	gccttgctcat	tggaaatttg	gttttatttt	gttaaaagat	2280
tgatttttag	tgcagctgga	ggccactaga	gggttttgg	agaggagtgg	ttctcttgga	2340
tgtgtgtttt	tacaagctca	ctcttgctgc	tgggtgggaa	gtgggttgct	ggggcaagaa	2400
tgcaagggtc	cattgtagtg	gtcctggaga	aagatgaagg	ggctcagatt	agcttgacga	2460
ctgttaggat	gtgggttttg	agtagattgg	tttgagacgt	accttgccag	ggggatcgag	2520
aggccatagt	gactgattga	aatagagggg	gaggatagt	gagggatcaa	catgccttct	2580
gggtttctcg	cctgaacagg	tgggtggatg	gtggctcctg	gacagagcct	gggggtgacc	2640
tagagttggg	ctttgctctc	acgtcttcag	gtggagctgt	cctggaggca	ggtggatctg	2700
tccctggaggc	aggtggatac	ggagcaggga	taggctagag	gcattcttct	gggaggcgga	2760
gcataattaga	tgggtttacag	tccacagcct	gggagagtgt	ctcgggggag	tatcagtaaa	2820
gaagaagggg	gccttggggc	tgagccttga	ggaaccctaa	catttcttgg	ggtcaggcag	2880
gtgccctgac	agatagactt	gagaagcagc	aggcagtgag	ggagaggaca	cccggggagc	2940
atgcggcctc	acagaagctg	aagtggggac	cacctcaggg	gcagcagatg	gctgttctgc	3000
tgttgtgaat	gctgctgagt	agtgggggaa	gagagttggg	accaagagaa	gcccagtggg	3060
tttgataaca	tagaggtgac	agcgacattg	atcgaggcag	tttaggggcc	atgattggct	3120
cagaagctag	aggagcctgt	gtggagagtg	aatgggaagc	aggtagtggg	catggcagct	3180
ctttcaagag	ctgtaatgaa	gagaagcctg	aaggagacta	tgggtgctgag	agataatgtc	3240
ttaaagaaca	tgggggtggg	attctgcccc	gggagctgga	aggggaaggag	ttgtgagagg	3300
atcccaggct	ctgagggcag	gagagagggg	caggtccaga	agcaggaggc	aaggtcgaag	3360
ctcagagggg	tgggcaaggg	cagtggtgat	gttttgagta	gacggggaga	aaggggaagg	3420
tatatgatag	ttaggggggtg	tgggaaatgg	agcctgctag	agaaacagta	agatttccag	3480
caggatggag	gacacatttg	agattttacca	gcatgagtaa	aaagtgaac	ttttcgaagc	3540
caacatttag	ctgttttgag	aaggagcttg	ctagagtttg	ggatttttcc	agtaaggaag	3600
gaaggcaccc	cagaattaag	ctggacagag	gcatttgaa	ccaggagctg	aaggacaccc	3660
gctgcaggaa	accaccttcc	tgtccctttt	tgggtaacac	tgatgatcgg	aaaagctcca	3720
ccccaactcc	tgtcatctag	agccttgggg	tcttagtttg	aagggttcca	cagcaggcat	3780
gatctaactc	tggacaactc	tctgtatctc	aggagatttg	tgccacaccc	cggctgtttc	3840
cagatgaccc	acgggaaggg	caggtgtaag	aggggctgct	gggggattgc	tggttcctgt	3900
gtgcctgcgc	cgcgctgcag	aagagcaggc	acctcctgga	ccagggtcgg	ggccccctcc	3960
ctgtgtttgt	cctggagccg	gtttcttttt	gcgtttctcc	agcctgctga	gtaccaggag	4020
gccttgcgaa	agcagagctg	tgccgcagcc	ggatctcctg	ctgtgttggg	ggaaggcagg	4080
agagttccaa	ggcagaggct	gaggactgca	ctctgtccct	ctgctgcagg	ggggggtgcc	4140
ttggcctgcc	agaaggctcc	atcaggggag	ttcgccctgc	tctgtgctct	cctgaccccc	4200
ggactccatg	gagtcagatc	accacgttta	gaataaagag	acaaatgtgc	cagctcacag	4260
gaggacgggg	ctggctggca	gcctctgctc	cagatctctc	ctcagctagc	tcgctgggtt	4320
tcttacaggt	tttgaatata	agtttgcaaa	aagtatttaa	acctgtttct	gtgggttagac	4380
agataactctg	ggaggagaag	gccttctcag	gttttcctta	cctgggagtg	ttcaccgttt	4440
tatgcttggt	ttgttgctaa	gtgttgctga	ttaatgcagc	ggcgtcaaca	gtgtgacctc	4500
attcagagtt	tactcatgt	cccaggcccc	atggtaagcg	tgtcacagtc	actggctttc	4560
agacacatgg	tcttaccagc	tttgactttt	tttttaaacy	agagtgctaa	aatcactgcc	4620
attgtgtttc	tggccgtaaa	gtggcagagc	caggaccgca	ccagggtgcc	gtgcccagcc	4680
tgcactcccc	cgatgctggg	tcagaatgct	tacccttgaa	ggagccctgc	ggtggacgct	4740
gtgggtgcaa	gcagctggcc	cagagtggg	gcgccaggct	cccagcagca	ggaggggctg	4800
ctgttctctg	ggtgacgtgt	tgcttgagc	cagctcggtc	aagaactggg	tactcatgc	4860
ccttgaatgt	cacatttggt	ttggcttcag	gtcagatgct	tttagtgagg	gcagcagagt	4920
gtgtccccgg	atatgtggct	ccctcggtgt	ggctctcaag	ttttgcaatg	agaggtctgt	4980
taattttcatg	tgggtgatgc	agccctgtgc	aggcgccgac	atccagggtg	gccgtagagt	5040
tctctgcgac	atccagggtg	gccgtagagt	tctctgcgac	atccagggtg	gccgtagagt	5100
tctctgcgac	atccagggtg	gccgtagagt	tctctgcgac	atccagggtg	gccgttagagt	5160
tctctgcaga	ccgcgggtgcc	tgtggagcac	tcagctgtgg	ccacaccgcg	gccgggacac	5220
tggagtagcg	ccgggtgggtg	cttatatcac	gctcgccctt	tgttctctcc	tgtgcatggc	5280
aggtcattcc	tccgggacag	ccgagctggg	ccgaccagga	gtaccggggc	tccttcacct	5340
gtcgcatttg	cagctttgga	cgctgggtgg	aggtgaccac	agatgaccgc	ctgccgtgcc	5400
ttgcaggagg	actctgtttc	tcccgtgcgc	aggggagga	tgtgttcttg	ctccccctac	5460
tggaaaagggt	ctacgccaa	tgcgtgtgct	gggggctgaa	gggcctggcc	tggggcaagt	5520
gggagctgcc	actaccatgg	gctgccccag	gagggctctc	gctcactctg	ggctgcagag	5580
cccccttcag	ttctgagggg	ctggcagctc	attctgtgag	tcaggctgac	aggccagggtg	5640
cagagattct	tcttttgggc	ctgtggattg	cccactccct	gctttccctt	cccttgttcc	5700
aaagcccagc	gtggagtcgt	tctccacaga	gaacatgtgt	gcccctctcc	ttatttttatc	5760

ggccccagca	agaaagatgc	ttctttatat	ttgtttgtgga	atggttggga	caggcagact	5820
cattgtgtag	tcgttgggga	ggagtggagc	taccccagca	taccaacact	tgtgtatcac	5880
ggtgcttgct	ggctcagggg	accaggaccc	tcaccatgag	tcataattga	atagccttcc	5940
ctcttagaat	gcatttgtct	tcttgccaaa	ggcaactgga	ctgacaggca	ggcaggggaag	6000
ctggtgaaca	tgggaaggct	ggctggtgac	atcagtgcct	agtgaagcct	tccatcccaa	6060
gggctgtttt	aggaaaagca	gggttggagc	ttgagagcca	agggatgtgg	gcattccatag	6120
cttccacgcc	tcctgcccctg	ctcctgtgcc	cacaccggat	gccagagagt	ttctgtgtgt	6180
gggcagagga	ctgcagggcg	ctcacgcttg	ctgcaagta	agggctttga	aggtgaggct	6240
aagccttgac	ttggtgagga	tgaggaagaa	ggcagagggg	agtaaagagg	tgggattgag	6300
gcagcgggtg	gacgatttgg	ggtgctacag	accatgggaa	tcagagaggg	ggccatgtct	6360
aatgccagag	gctcactccc	atggtgattg	tgtcccctag	ggtccatggg	tcctacgagc	6420
acctgtgggc	cgggcagggtg	gcggatgccc	tggtggacct	gaccggcggc	ctggcagaaa	6480
gatggaacct	gaaggcgcta	gcaggaagcg	gagggcagca	ggacaggcca	ggccgctggg	6540
agcacaggac	ttgtcggcag	ctgctccacc	tgaaggacca	gtgtctgata	agctgctgcg	6600
tgctcagccc	cagagcagggt	gaggcacgtg	gccaacatgg	gagggctgca	gccagcgtgc	6660
ccccactgct	caggcctcag	gcacactgta	gctttttatg	tgactggcta	cacagccctg	6720
tcaggactaa	gtgggaagaa	gtaagcttgt	tctcaagggt	ggtgtcctca	gtttgtgacc	6780
ttcccctgct	gtcctcttcc	agagggacgt	ggcccttctc	tcctctgacc	agtcctttcc	6840
actagtgcga	ggcaggaaga	ggtggcaccg	agtcaaagcc	cactgtctgt	gccatccctg	6900
gcccagctgg	caacctggca	aaatcaaaac	ctgtttttta	ttttagtgat	agataacatt	6960
cgttaaaaac	agtttgtctc	caaaaaatga	aaggggcccag	gtgtggtggc	tcacacctgt	7020
aatcccagaa	ctttgggagg	ctgaggtgag	agtatcgctg	gagcccagga	gttcaagaga	7080
ccgcctggg	caacatggca	agatctcatt	tctacaaaaa	atgaaggaaa	aaaatcactt	7140
agatggaacc	acatgtgact	tttgagtgcg	ctctcagttt	tccatgagca	cgcacggttt	7200
acgtgttccc	ttccgcaccg	cttctcacac	tgccacacac	gcgctgtcaa	atgttcgccc	7260
catgagcggg	tttgccacag	tctcttaatc	attcccctga	tggtggatat	taagatctct	7320
ctggttttat	ataattataa	gcagtatcaa	tgaacatctt	tatcattttt	ttcatactta	7380
ggattatttt	aaaatatggg	ttaaagaata	tgaatatcac	agtaaactga	aacaagtgtg	7440
cataggcctt	ggtctgggtc	ccccataagc	agaccctgag	atgaggttca	ggagcacgtt	7500
gagaggttca	gagagccttg	agggcgctga	ctcccgcga	gccccgctgg	ggtgccagga	7560
aggacgctgg	cctcagagcc	tcccacttgg	gagtgagggc	gctggtctgg	tgggcattag	7620
ctcggggagc	tggttggtttt	gggtgctcca	gggtggggta	gcgctaagtc	ctagcacttc	7680
aggcttttaga	ggaagccccc	aggcagagag	agatggcagc	tggcactgac	tggaggtgca	7740
ttggagcctg	ctgaggtggc	aaggggcccgc	ggcgtgggcg	agactgaagt	ccttccagga	7800
gaccctcctc	tctagaccgt	tgccccgcga	cagatgtggc	cttccctctc	gtttggctct	7860
ttctttttcta	tgcccatctg	tctcaaggte	tctggccagg	tggagctgtt	gccccctgg	7920
gcctccatgc	ctccagtggg	cttctagcca	gggcactatc	tgaatgtcct	acctctagca	7980
ggcttttgcca	agagaaacac	tctctagatt	tctggcagtt	gcagatgcat	ctgtgcagca	8040
tgttttgaaa	tgggtgctgt	gccaggcatc	gtgcacagat	gggtacggac	gatgactgag	8100
gcctagagaa	ggggatgact	taccagcac	cagaccgga	tggcagccga	gtcaggcccc	8160
gtgtgcttgc	tcctggagat	gctcctgagc	tgatgggtca	cagctgctaa	gaaaggagct	8220
ctcgtggtcc	atggggatct	gggtctctcc	gtgtagccat	agtggggtgg	gctggagcat	8280
ctccagagga	ggaggcagag	gcctgtgtgt	ccttgtcagt	ttgggactcc	atggtgccct	8340
tcctgctgt	gcctgcgcca	ttcctcatgc	aggtgcccg	gagctggggg	agttccatgc	8400
cttcattgtc	tcggacctgc	gggagctcca	gggtcaggcg	ggccagtgca	tcctgctgct	8460
gcggatccag	aacccttggg	gccggcggtg	ctggcagggg	ctctggagag	aggggtgagc	8520
gctggggcct	ggaccatgct	gctgtcggga	ggggggccca	gtgccagtct	ggcctgtgtc	8580
ctggctcacct	tcagctgtca	ggactgtact	tggctgtctc	cagcaaggcc	cctgagtcct	8640
tgctctcgtg	acaccatgct	tgtcttggct	ccaggcaatc	cttgtgaggc	ctgggaccaa	8700
ggtggccatt	gggcttgggg	tttcaatagg	gcagacatca	tcacgggctc	gggcagcagt	8760
cctgggaaga	cgcattccaga	ggcgtgaagt	tcctctggga	aaagagaggg	ctccagggtg	8820
gcccgtgccc	agaaggccct	gtgctgcaga	gctgcttcgg	gtgtgggagg	ggctgcagag	8880
ctggggcacg	gggtcgctgg	caggaaactca	gggtctctctg	ggtccctccc	aggcttcccc	8940
ccagcctgcc	ggcaagttaga	cactaccagt	tctcgggagg	ggcttctgct	gagatgaggt	9000
ttcttccagg	ggtgaagggt	ggagccaggt	agatgcagcg	gtagcatctg	agctcctgtc	9060
ccagctccag	gaaggggagt	tctgggtgga	ggaggaggag	ttcctcaggg	agtttgacga	9120
gctcacctgt	ggctacccgg	tcacggaggc	cgccacctgc	agagcctcta	cacaggtagt	9180
gccccgaggg	gctgtgctgg	gcacgtgctc	tgcttgcga	agtgaggagg	ctgggcacgg	9240
tgccctgggtt	ccccctgccc	aggcccagtt	tggttctctt	cagcgtggag	agatgattct	9300
gtcccaggag	ccgggaggag	ggtgatgatt	ctgtcccagg	agctgggagg	aggggtgggt	9360
tgtgggaggg	gctggctctg	tctgtggcgg	tagctgctgc	ttagaccctg	ccagggttca	9420

tgaggccacc	gtggcgggag	gccagcgagg	agccgtgtcc	cacagctgat	gcctgggtgtt	9480
ttctcactag	agaggctgct	ctgccatacg	cgggcgctgc	ctggggcctg	ggtcaagggc	9540
cagtcagcat	gaggctgccc	gaacaacagc	ggctttccca	gcaaccccaa	attctggctg	9600
cgggtctcag	aaccgagtga	ggtgtacatt	gccgtcctgc	agagatccag	gctgcacgcg	9660
gcggactggg	caggccgggc	ccgggcaactg	gtgggtgaca	gtcatacttc	gtggagccca	9720
gcgagcatcc	cgggcaagca	ctaccaggct	gtgggtctgc	acctctggaa	ggtaactcag	9780
ccccgtctgg	ctcacgctcg	gttcagcagg	tgggtgtggag	gccccatggag	gtctgggttc	9840
taggactggc	tctgccggga	cacatgtgac	tctgccacgg	gccccaccag	tctccccct	9900
ccttgggctg	ttgcacgggg	ttgacgtctg	ctggtgtctc	cagaccgggc	tctgacctga	9960
gactgcaggt	ctttctgcct	tgccgtgtgc	ctcattggcc	aaaggaaagc	aacagagtct	10020
gcagccaggg	caggaccgcg	aggaggggcc	tggaccgggg	gggctcctgg	cagcgccgtg	10080
cctttctgag	gcaaggaggt	agagccagcg	gctgaggacc	tgtcaggggc	agtcccagct	10140
ctgcagcttg	ctgtgtgacc	tggcacacat	cctctccctg	cctccctcag	tctcttcccc	10200
tgcaagacgg	ggtcctgaca	cggatctcat	gggattgtct	tgaggccag	gcagtcccag	10260
gctcaaccac	tggttcacaa	agtgtgttgt	ttccaggaag	aacagatggg	ggcgccctgag	10320
ggcaaagggc	ctgagtgtgg	tcgaggatat	gccggctgct	cgctcagggg	ctgggttttc	10380
atcttgtgtg	tcttgacagg	gtgtgacact	tggcaccaca	ctgttccctg	tcccttcatg	10440
gatgtggccc	acatgatgtt	cctttcctct	tgcaaaagaa	gttgctggaa	ggcccactgt	10500
ccagcagccc	ccaggttgcc	tgggccacgg	tgcctttgtg	ggcccagcta	caaggaggac	10560
ttgcaggctc	gtgtctggga	cagatactgg	cgccaggggc	aagtgaagcc	cgggatttgg	10620
gggcatctct	agctggctcc	tgagagggg	tggagggtgc	tgacaggcct	tggcgctttc	10680
atctgtcaac	ctcagaggcc	cttgtgcttg	cagcaggag	gtcaaggcca	gggcgtctga	10740
ccccggccgc	tccctcacac	tgagcctcct	gcacgtgtct	acaggtagag	aagcgccggg	10800
tcaatctgcc	tagggctcctg	tccatgcccc	ccgtggctgg	caccgtgtgc	catgcatacg	10860
accgggaggt	ccacctgcgt	tgtgagctct	caccgggcta	ctacctggct	gtccccagca	10920
ccttcctgaa	ggacgcgcca	ggggagttcc	tgctccgagt	cttctctacc	gggcgagctc	10980
cccttaggtg	agaggaaccg	cgcagtgtct	ctggctctcc	gaggccacag	gcccttccaa	11040
ggcaggattt	gggcactttc	cctctgtggt	tggcagggtg	ccatgtggga	actgaggcca	11100
ctgggaacct	gctgccagcg	ccctcccatg	tttgtcttct	tggcagcgcc	atcagggcag	11160
tggccaagaa	caccaccccc	ggggcagccc	tgccttcggg	ggagtggggg	accgtgcagc	11220
tacgggggtc	ttggagagtc	ggccagacgg	cggggggcag	caggaaacttt	gcctcatacc	11280
ccaccaaccc	ctgcttcccc	ttctcggtcc	ccgaggggcc	tggcccccgc	tgcgtccgca	11340
tactctgca	tcagcactgc	cggcccagtg	acaccgagtt	ccaccccatc	ggcttccata	11400
tcttccagge	aagctccttg	ccccagggag	ggagggggag	cagaaggggc	cctcagagaa	11460
tttgcatctt	ggcctccatt	gtcccaacag	agggctctgg	gctcagtcac	ttgggctccc	11520
cctgccttct	gaggcgctgc	ctagaacccg	cacaggggcc	tctcccatct	ccaacctctc	11580
agaggcaagg	ccgaagatgg	cctctggaag	ggccgggggc	ctgggaggtg	ggcagggtg	11640
atccaggcag	ggcagggttc	ggtgagtggg	gggtgagggg	gaggaaggga	gaagtgttga	11700
gaggacagga	ggccgaggtt	gagaccagcg	gggggtgggtc	gagccctggc	ttgggaacgc	11760
agggggctga	tggactcagg	agtgagagga	ggggaggccc	aggctggctg	gccacagcag	11820
ccctcgggtt	gtgaggaagt	ccacagtcac	tgagctcagc	cagcagcccc	tgtccactta	11880
ccctgactca	gaatgactgt	gtcccaaggt	tcattctctg	cagacatgtg	tccctgggaa	11940
tgcagggggc	ctgacgagga	aggcactgca	accctcggtt	cacagtgggc	tgcctgggga	12000
cccttggacc	ctcgctgttt	gccctgggcc	accggctcag	gtcccttaga	gctctgagga	12060
aaacacatgc	caggggccagt	gggagccctt	ggggcgggct	gggcagtcac	aggtgttaaa	12120
gccccctgat	atgtgacagg	cctccaggcg	ggggccccc	tgccggcacc	ttctggcagc	12180
gggtggccagg	ccttgggtgag	cagtgtccag	gacctgtccg	gcctggcagc	ccctcctcag	12240
agaaggggct	gtatgtgact	caagagggcc	aagggcattc	gagcagatgg	ccctgggctg	12300
ggctccctac	cccaaggctg	gccccctca	gtctgagcct	gcgttttctt	cagggtcccag	12360
aggggtggaag	gagccaggac	gcacccccac	tgctgtgca	ggagccgctg	ctgagctgcg	12420
tgccacatcg	ctacgcccag	gaggtgagcc	ggctctgcct	cctgcctgcg	ggcacctaca	12480
aggttgtgccc	ctccacctac	ctgccggaca	cagagggggc	cttcacagtg	accatcgcaa	12540
ccaggattga	cagggtggggc	tctgggactt	gggggcgggc	agctggaggc	tgggggtgctg	12600
gagtccttagt	gctcgctgtg	ccccccacgt	ctcctgctcg	ccccccacc	tcaagcccc	12660
atctgtcctg	gcagaccagg	gctgtcctgc	ctacctgggg	acccttccct	gctggtctga	12720
gcctggaagg	agagtctagt	gggaggtggg	ccaggagcac	acagccactt	gtgtgacaag	12780
tgcagtctgg	gagcgctgat	ctggtgtctc	tccacaggcc	atccattcac	agccaggaga	12840
tgctggggcca	gttctctcaa	gaggtgtgta	tgcagccccg	ccagcccggc	tcacctgcct	12900
ggggctgcct	ggtggccctag	ggtctacctg	caacctcagg	cagggtgggtt	ctgcctggga	12960
cgtgaggtgc	ccttgactct	tctgtgaga	gccccggggc	gtgccttgaa	gggcaggggg	13020
agctgaggct	gcgtcccat	ccctggctgc	actcgggggtg	gggtgtgaga	aggggcgagt	13080

gccaccgctg	cccgggcccc	ccatctgtct	ttgcaggtct	ccgtcatggc	agtgatgaaa	13140
acctaacagg	gtggcccccct	gtgccagctc	aggtgactgg	agccccaggg	cctgacaggt	13200
ttccagcagc	tgggcccggcc	agccttgcac	tgtgggggct	ggtcctgagt	cttggcctgc	13260
ctccccagccc	tgccaggggg	ctgcggccta	gggggtccacg	ggaagcctcc	gtcaggagag	13320
acgcagccct	ggggggccagc	tggtgctgca	aggaaggggtg	ggaagcttgc	tggcttctgt	13380
tgcgccactg	agacggcgaga	gaccccagga	ttccagagct	ttccaggatc	cctcccagat	13440
cctctgctga	ctccatatgg	aggccccaca	cccagaggggt	agggcagcag	atcttcttta	13500
taactatttta	ttgttcgaat	cactttttagg	atgtaacttt	ataaataaac	atgagcgctg	13560
atgatttgca	gatcagtcct	gctccaggta	gttccaggct	gtgcctgctc	ttgccaagca	13620
ggctgtgggg	agggctgggt	gcctgccgag	atggtgagga	tgaggatggc	ctctggaggg	13680
gctggggggcc	tgggaggtgg	gcagagccaa	cccaggcagg	gcaggtttca	gggggagatg	13740
gtgagtgggg	aggaggggag	aagtgttgag	ggggggggccc	agggcatgcc	ccaggccagg	13800
gggctgaggt	tgaggctggc	cggggcaggt	caagccctgg	tcttggggga	cacagactga	13860
tagactgggg	agtgaagggt	ggggagagcc	agcgaaggca	ctgccaaagg	tgtggcgaag	13920
aaggacatct	cggaaacggg	tgttagaacc	ggagttgcgc	agagggagga	accaggttc	13980
acgtggactg	ggagccttgg	atctggacgg	ctcctctgcc	tccagccagg	gttcacctgc	14040
gcagtgtcct	gggattgttt	atttccccag	gcctctctcc	ctcgtccctc	acaccaaagt	14100
ctgtgatgag	agctgtagtg	tactgaacg	gtgcagaaga	cagttccaga	catgggtggg	14160
gagggctgtc	actaagccct	tttgttttag	agacaggggtc	ttgctctgtt	gctcaggtcg	14220
gagtgcagtg	gcatgatcat	agctcactgc	agcctcgacc	ttctgggctc	aggtgatctc	14280
ccctcttcag	cctcccagg	gggtagga	acaggcgac	actccatgcc	tggttagttt	14340
tttcaagttt	tgaatgctta	ggggtcttag	tatgtggttg	cctaggctgg	cctcagtgat	14400
cctcctgcct	tggcctccca	aagcactaag	attgcaggca	tgaccgccaa	ccccagctct	14460
aatccctttt	aaattccatt	cgcttctctga	gtccctttgt	gcctggggag	accccggtga	14520
ttggctcctt	ttcacattgc	tgtaaacaac	tctgagactg	gtaatttata	aagaaaagag	14580
gtttgattgc	ctcagttccg	aagactgtac	aggaagcatg	gctggggagg	cctcaggaaa	14640
cttagaatca	tggcggaggg	aaagcaggca	gtctgcaggt	gtctggagaa	ggaggaagag	14700
agcgaagggg	aggtgctgtg	cactttttaa	tgaccagatc	ttaggagaac	tcactatcac	14760
caaaacagca	agggggatat	ccgctcccat	gatccaatca	tctcccacca	ggctcctcca	14820
acactgggga	ttataattcg	acatgagatt	tgggcaggaa	cacaaattca	aacctatgca	14880
cccagtgagc	ctgattttgg	ccttgctgcc	cgatcacgac	catctctgga	gtcctggtgt	14940
ctgttcccac	tgggacctgt	gccgctgtcc	ccctctccac	gccctggcca	cgccaagcca	15000
ccctcctgac	tcaccacag	gaagctgccc	tggccctgga	gcctgccccg	tgagccctc	15060
tgttctgtgg	ttcaatggcc	ctccagcagc	agtggctgtg	gcagctgggt	tctcggcatc	15120
ttcagacacg	gattccttag	cagcaggatg	gggctccatc	tccctgctgt	cagagcctgc	15180
cacagatctc	cctcatccac	tggcttctgt	gctgacttcg	gatgaagcca	gtggtgccgc	15240
ctattggggg	acagcaactc	agggcgaa	gtgagggg	gctcaccaa	gaaatacccc	15300
gcagggcagt	gcccagcca	gaggcttag	ctgggtcgga	gctgccctag	atccctgggt	15360
ttgtgggcgg	acaggtcctg	tgcaggcg	ctgattggtg	aggttgaggt	gggacagttg	15420
gggtcaaggt	atttctcagg	cacagtgcct	atgaaggga	gacagttgca	gggactgtgt	15480
ccatgtcagg	atagactgg	ggggacccc	tgaagagttc	tggagcaa	cctgcctgca	15540
gggccccacc	tgggctggcc	aggcccttat	ggtgagcatc	ccttccccca	ggccctcagg	15600
agccactgtc	cccagggcag	gccctgaagg	tggcggcaaa	accctcctgc	tgggcagctc	15660
tgcccaaagg	ccacagccag	gacctgttc	ccgcgtccag	gctactgcct	gagaggaggc	15720
ctcgaaagcg	cagggttccg	tgactttaga	ggccatggtt	ggcaccatc	atcgccccag	15780
tgtagatttg	ctccactcga	cctggctgct	ttggccattt	ggtctaccag	ctggaacct	15840
gttctctggg	gtggaaaacg	ctccctcgga	agcctcgga	gagccctgag	gccttgtgct	15900
tccttctgat	gggaggttcc	agatgcagtt	ggaggggatg	tctggcaggg	ctctaacc	15960
cagccaacct	aaacatttct	ggtgcagaag	gccccggcct	ggtgttgttt	gtccctggct	16020
gcctcctgct	ctgacaccat	cagcatcctg	ttgccaaggt	catggatcag	tgcggtgctc	16080
ttcaggggtg	ccggccagct	ggggtctctg	tcctgtattc	cggcagaggc	cccaggagaa	16140
acagcaaagt	cctttgtcca	ttccatacaa	atttcatata	aatgtgagca	gcttctgatc	16200
ttccgtggcg	tattcgtcca	gttgatggcc	aacctgggt	acctggacct	ccaggacctg	16260
ctgcactggg	ctgccccctg	gctgtgtgtg	cactgccac	gtggccctcc	aggaatccca	16320
tcccacgggg	ccacactgaa	ccaaatggag	agagcagggc	caccacctc	tctccgcatg	16380
ccacggctgc	tctgggaccc	gggcaggagg	ggacagtctt	ggccttccag	tgtccctctt	16440
ggccttccca	cggccatctc	tacccaagg	atgcagcaga	gatatcggtc	gctccccagg	16500
tgtcaatccc	agtcacaggc	tcagagaccg	ggacatggcc	ccgggtgggt	ctgtaggccc	16560
tgtgggctca	tgtgagctgg	tcttgggcag	gactccatta	ttactgcct	gtgatgtgtc	16620
ccactgtcat	ggagccctgg	tgactcttgg	ggaccagcat	cagcttgggg	cctgtgtgct	16680
cagtggctcc	cagatgcctg	gatattctct	tcctggtgca	catagtcccc	ggggaggtcc	16740

ttgtcatgca	cacttgctga	tgtggggagt	gtccttcac	ttgcaggcct	ggccacctct	16800
tcagtcagca	gatacctggg	ctgaaaaccg	actcgggcag	tgtggggcca	actggggctc	16860
tatcggagtg	accaccctca	gccctcctgg	acccctctgc	cggctccacc	tgagcgctgc	16920
cctcgctggc	agccctgcct	tgctctgctg	ccattccgta	agccctgcag	gcaggccctt	16980
tggcgccctt	cagccgtggt	catgattgtc	tcttggcctc	tgctgtttag	aggtctaagt	17040
ccctccggcc	ccggcgagcc	aaacccagtg	atgggtgttc	ctgccaccag	cttctctgtg	17100
caccgctgcc	actccgccca	ggctcctggg	gcaccgcgcg	cactcccgcc	aggtctctgg	17160
ggcaccgcgc	gccactcccg	ccaggctcct	ggggcaccgc	cgccactctc	ctccaggctc	17220
ctggggcacc	gccgccactc	ccgccaggct	cctggggcac	cgccgccact	cctgccagcc	17280
tcttgcggca	cagctgccac	tccctattaa	ccagcatggc	acaggtgagc	ggtgtgacct	17340
tggctctccc	agggaaccag	tgcttggcag	ctcacaccac	acacgcctac	gcctaccctc	17400
caccagccac	agcagttgtg	gcattctctac	cctgcccagc	aaaagtggaa	gtgttgacct	17460
tgccgctagg	aacctccagg	tttgctccac	ctccaggggc	cttgccaggg	tgtcaaacct	17520
gtgtctcggg	acactcgtgt	taggtctcca	gcttccctat	caggcgcttc	agcaccagct	17580
ctaccagtg	ctccgcctc	ccgtccccag	ctggctgggc	ctgcagcccc	ctctctgtcc	17640
ccgagctggc	cgggccccga	gccactccc	tggctactgg	atgttgctga	cacttcactc	17700
ggtcagagcc	ctagcaccca	agggggggcca	gggctgacg	ggggtggagc	gagggggtgg	17760
gccgcgtctg	tgcaggctca	agaagcttcc	taagaggctg	gagagtggaa	ccttcaggca	17820
ccacgcactg	cctcctccct	gccacgggtc	ctgggtttct	ccagatgggg	ccttggcctt	17880
ggctaggtgt	tgatcaggag	ctgggagtg	tgcgccccg	ccaacttctc	caaactccag	17940
ccagggcacc	tcagttaggc	ctcagccacc	tgcgccttat	ttgttctctc	cttggaggcc	18000
ctcgtctctg	ttcattctac	aaacagcagc	tggggccccc	agcagacccc	cttccccaac	18060
tttcccactg	gacactggaa	ccagtttcac	aactggactg	gacagggacg	accaccttgt	18120
gccaggcgcc	agctatctcc	cctgaccagt	gatgggtcct	cattgcccgt	gggccgtgag	18180
tgaccagtt	ccaaatccca	aattagtac	tctcttctcc	aatgggggtt	ggattctcca	18240
gaagcagagg	cagacataga	atttggtg	aaggtatttc	ggaggggaag	tggaaagagt	18300
ggggttgggtg	agggagaagc	ctggagtgtc	ggtggccggg	gtgcccccac	ctggctgaaa	18360
cgctgggtct	ttgtgccctg	cctggctcag	cctccccagg	cagactaccc	catggcatcc	18420
ctggacaagg	ctgcccccaa	gaacgctgcc	cacagccag	ccatgggcct	tcccttgggg	18480
ctaccgcccc	ggctcacacc	tgttggccag	cgtatttact	ccttgcctgg	tgcacctctc	18540
cagcagtggtc	tgtgtagacc	ataaacctgg	gaacacctgc	ggggagaagc	gcccttggcc	18600
tggcggtctg	ggggagacac	ctggggtgtc	aggaggggaag	gaaggcaagc	aggggtgagg	18660
cactgtggga	cttttctctg	tttctggggc	agtggccaca	ggccaccag	tgacatttct	18720
ctctcagcgt	ctgctggggg	ggactctgca	gcggctgcag	ccagcctgga	tcggctcctc	18780
gcacagctct	gcttgagggt	gaaggccatc	tagaaaccct	cagtccccct	tcagcctcag	18840
agctgatagc	gctgcctgac	catcagcaag	cttghtaatca	gcaccacctc	cagcatgcct	18900
gctcctggat	ctccgtgagg	ctccccctgc	tgtgtcacc	aggggcctct	aggggtgctc	18960
tggagctggg	agccactgtc	cagcacttcc	tgcctctctc	ggcctctctt	ggctgtctgc	19020
caagcagtea	ctcagtctcc	tattgaccac	tcgttttgcc	gcaaggctgc	tggtttacgt	19080
gaaaatagag	aaagccaaaag	agtttctca	ccctgtgaag	atttactggc	tcttctggca	19140
ttgcacctgc	ctgagttcct	tgggtggggc	cctcttttag	ttcctttggg	ctgctgtaac	19200
aaagcaccat	agcctgggca	gctcgtaaac	agtggaaatg	cgttgctctt	tgttctggag	19260
gctgcaagtc	caagattgag	gcactggaag	acctggtgcc	tgggtaggac	ctgcttctct	19320
gtccagagac	agcaccttct	ctctgtgtcc	tgatgtgggt	gaagggcaaa	ggaactccct	19380
ggggcccgtt	ttatgtgggc	actcatcca	ttcgtgacgc	ctctgccttc	atgacctcat	19440
cacctaccag	aggtccccac	cttttcattc	ctcactttgg	ggataggac	ttcagtatgt	19500
gaatttcggg	gacataaatg	tgtcatctat	agaaggggcc	atctcttaca	caaagtctgg	19560
gtcccagtg	gcctgtgtcc	tagcaaatga	gagccaccct	gaaaaataaa	atcctgtctc	19620
ccaacgccca	gccctggcaa	ggcaccagca	actctccgga	atgcttgaag	gcagggcctg	19680
gcctttccat	gggggtccagg	gctgtggggg	ccctggcggt	actgtggggc	tgcagagtgg	19740
ggcatgtggg	ctgaagaccg	tctccccacc	atgggtgggaa	aggacaaagg	gtggcccttg	19800
cagatccgga	cgggcaggac	tgggtgtgtc	ccatgagagc	acctcttctc	tggcctttcc	19860
tgtggacttt	gtcccacacc	acctgctctg	gttctctctt	ttactcactt	ccagctccag	19920
gcacagcagt	tggtgactcc	ttgggtgggag	ccgtgtccca	ccgggtcctg	atactgccgt	19980
cttctctttc	acagtctctc	aggcttgggc	cagccttggg	ggcagcagag	cttctggggg	20040
gagtgtcgag	atcctgtgtc	ctgagagcgg	tagtcaggga	gagggctggt	cggggcaggg	20100
ctgcccgggc						

ttggaggaaa	ggcttttgca	ggcaggctga	cctgggagtc	tccggagctc	ttggctctct	20460
gtagcatcct	ggggagctca	gaccatggct	gcagggtctct	ggccatagct	tgcaggccat	20520
ctggttagtg	ctgcccccca	aaccgggcca	tccctctcta	gtccccagca	ggtatagcca	20580
gtgtccacat	agacagcat	gcctcagatc	tgggtctggga	ccacaacact	cactcaggga	20640
tcccagggaa	catggcacca	ggtttagtag	gttttagtcgg	gcatatgcag	tgtcccttac	20700
ccagggtcaag	gctcaggctg	ggcccatctt	agctgcctgg	gacaccagct	ccttttatga	20760
atctgccagg	ggaggagcag	ccaggcttgg	gctggggcct	ggatggacgt	gacatcgggc	20820
actgtggcat	tgtgtgcctg	tctctgtgtt	gcaggctgga	catgggctca	ttgctccttc	20880
tccaagccct	ctgaggacat	caaaagcgtg	gacgcatcac	tttccaccat	cttgctgccc	20940
actgtccctc	catcctgagg	cctcctaagc	acatgtgtgg	ggtggcaggc	acactgctga	21000
tagctgtgga	tgcggccctg	acatccttca	cccctgcccc	catggcatgc	atgatccatt	21060
agggaggacc	gtctgcacaa	aggtaatcca	ttgactcaga	caggggggttc	atagaagaac	21120
aggtgagagt	ggcagggggg	gtattccttg	accagctgag	ggtcagccaa	gggcaggaaa	21180
ggggctgggc	accctcaggg	aattgaaaga	agctctctgt	gcctgcagtg	cggggagtgg	21240
gcttgagaaa	tatggcaaga	gctgaggctg	gagatgtaag	caggggcctt	aagtgttgtt	21300
taaggagcct	gagtcttatc	tcctgggcaa	ttgggagcca	ctacatagtt	taaagcaggg	21360
cctaacatac	atatgtttga	aatctttctc	tggctgaagt	ctcgaggatg	aattggaagt	21420
agaggaccaa	ctaaaaagtt	gttgcacgac	attaagggtg	tgtcctgggt	taggtgggag	21480
gtgatggaga	ggagaatagg	ctagtgttga	catataccca	ggaagcaaaa	ccattggggc	21540
atggtgctta	atgcttgatt	ggattgatca	catagatgac	tatgaggagg	actgacatat	21600
ttcaatctat	gaacgtggta	taccactcca	tttactattt	tttaattttt	taaaaatttt	21660
tttttttttt	gagacaggat	ctcactctgt	ttgtccaggc	tgaagtccag	tggcaggatt	21720
tcagctcact	gcagcctcaa	cctcctgggc	tcaggtgatt	ctcccacctt	agcctcccga	21780
gtagctggga	ctacaagcac	agatcaccac	acctggctaa	ttttttgcat	ttttgttttt	21840
tagtagaaac	agggtttcgc	tatgttgccc	aggctagtct	caaacgcctg	gactccaaca	21900
atccaccacc	cctggcctcc	cggagtgtct	gattataggc	tggggccact	gtgctgaacc	21960
ctgtccattt	atttggtact	tctttaattt	ctcccagcaa	tattttgaac	ttcaagcata	22020
cgtttcccac	ttgtgcctag	gtactttgtt	ttccaatgct	tgtaaatggt	attgtatctt	22080
tagttttatt	ttccaattgt	tttttgctag	tatatagaag	tgcatttttt	ggtatattaa	22140
tcttgatatc	tgtaaccttg	ataatgcatt	tattagttca	tagtgttttt	tgcttctttt	22200
gttcttttct	ggtaaagctc	ttaggatttt	ccttttctcc	cgactccccg	ccttccctct	22260
cctctttttc	ttctgcctta	ggatttttct	tttcttcttt	ctctctcttc	tcttccctct	22320
cctcctctct	ctcttctttc	ttcttctctc	ttcttctctc	cttcttttgt	tttaaattga	22380
gacaggggct	cactctgttg	cccaggctgg	agtacagtga	tgcaatctta	actcactgta	22440
gtctcaaact	cctgggctca	agtgatcctc	ccacctcagc	ttcccaagta	gccaggacta	22500
cagggtgtgca	ccatcatgcc	tggctaattt	ttatatgttt	tgtagagatt	gggtccttgct	22560
atgttgctcg	ggctggctct	gaactcctat	cttcaagcga	tcttctcact	tcagcctccc	22620
cacatgttgg	gtttacaggc	ctgagctact	gtgccaaagt	gaattttcta	catgcatgat	22680
tatgtcacat	gtgaccatag	gtaattttac	ttcttctctt	tctatctgct	tttttccctt	22740
gccttatttc	ctctggctgg	gacctccaat	accgttttta	atagaaatgt	gagagccact	22800
tcgtttgttt	ctgagtatag	tgagaaagtt	tggctcttta	ccattgcccc	gcttgaagtt	22860
tcctatagtt	tatctatagg	tgatctttat	cacgttgagg	aagtctctct	ctctttctag	22920
tttgccgaga	gtttctctca	ttcatggatg	ttgcattttg	tcaaataatt	ttctgcatcc	22980
attgagataa	atatatacat	tttaccattt	attctattaa	ttgatgttct	aatgctaaaa	23040
taaacctttt	atttcttgca	tactttttca	tgatgtgtta	tttgttttat	atattgctgg	23100
atttgatttg	ctaataattt	attaaggatt	ttatgtctat	gtttatgcat	gatattggcc	23160
tgtagttttc	ttttcttgta	atatctttgt	ccagttttgg	tacagggtaa	aacttgactt	23220
agaaaatgag	ctggccagtg	tttctccttt	tttctgatgt	ggttaagatt	ggtattattt	23280
tattcttaag	tgtttgatgg	aattcatcag	taacaccatc	tgggtgaggt	attttctttg	23340
tagaaaaggc	tcaaattatg	aattcaacaa	ctttaataga	tataagcttg	ttacatttta	23400
ttttcttgtt	gtaaaatttg	gcaagtgttg	actttcagta	gatgtttttc	catttcatca	23460
agatgtcaaa	tgtaatttca	tgatgttctt	actaatattc	ttgtattatt	cttctgatgt	23520
ctgtagggtc	tgaagggatg	tctcatcttt	tattcctgat	attagtaatt	tgtggatttt	23580
ttttctttga	tcaatctagc	cagagctttc	tcaatttttt	tttcttttca	aataaccaat	23640
ctccatttta	ttgattttcg	ttttttctcg	ctagtacatc	aaattttcac	tctttcttat	23700
ttcttctgct	tacttgggtt	tcatttttgt	cctgggtgtg	ttgttttcta	gattctcaaa	23760
gtggaatctt	aggtaatgat	tttagacctt	tcttctttcc	taacatgaac	actgagagct	23820
acagattttc	ctctaagcat	cacactaacc	ttatctcaca	aagaccggaa	agttgcattt	23880
ttatcatcac	ttagttcaaa	gtattttctt	atgtctcctt	gattacttct	ttgatccctg	23940
agttatttaa	atgtgttgct	taattttcaa	atatttgggc	attcctttgt	tgtcttatac	24000
cttggttgcta	ttgattttcta	attaagctct	gttgtagtta	gagaacatat	tctgtataac	24060



ttaaattcttt	ttaatttttat	ggaggcttaa	tttatggcct	agcagatgga	ctattttggga	24120
aaatgttcaa	tgtgcacctg	aaaagaatat	atattctgct	gttgttgggc	atagtgttct	24180
ataaacatca	gtttggataa	gatgattggg	gttgctcagg	gctatcatat	tcttactaat	24240
ttttgggttta	cttggttctgt	gagttactga	gatgagggtg	tcataataac	cgatcacaa	24300
catgaatttg	cttggtttatc	ctttcagttc	tatcagcttc	cttcattttt	tggattcttt	24360
gtaattagggt	acatacacat	ttagaattgt	tagatattct	tgatgaattg	accctttttt	24420
catatgaaat	atcctttttt	tttttttgag	atggagtctc	gctctgtcaa	ccaggctaga	24480
gtgcagtggc	gcaatctcag	ctcactgcaa	cctccgcctc	ctgggttcaa	gtgattctcc	24540
tgcctcagcc	tcctgagtag	ctgggattac	aggtgcccac	cactgcgcct	ggctaatttt	24600
tgtatttttta	gtagagacgg	ggtttcacca	tcttggccag	gctgggtctca	agctcctgac	24660
cttgtgggtct	gcccacctca	gcctcccaaa	gtgctgggat	tacaggcggtg	agccaacacg	24720
ctgggtccgtg	aaatgtccct	tttttttattt	tgcaatattc	cctatactaa	agtctacttt	24780
gatgttaata	ttttttattcc	tgctttctta	taattaatgc	ttgcatttta	taaatttttc	24840
cattcttttta	cattgttttc	attctttttt	ttttaacttt	tgtttatatt	taaagtatat	24900
atcatatcag	gcagacagca	tattgtcatt	tcttgctttc	ttttccctta	agacgaagag	24960
tctcctgtca	ctcagcctgg	aatacagtgg	taccatcagg	gctcactgca	gcctcaaact	25020
cctagattca	agcaatcctc	ccatctcagc	ctcccaagta	gctaggacta	caggcatgtg	25080
gcaccacacg	tggctaagtt	tttaactttt	ttttttcttt	ttttgagaca	gtcttgggtct	25140
gtcgcgccagg	ctggagtgca	gtggcggtgat	ctccactcac	ttcaagctcc	gcctcccggg	25200
ttcacgccat	tctcctgcct	cggcctcccg	agtagctggg	actacaggcg	cccgccacca	25260
caccgggcta	attttttttt	ttagttagaga	cgggggttca	ctgtgctagc	caggacggtc	25320
tcgatctcct	cacctcatga	tccgcccgc	tcggcctccc	agtccctagt	ccttttttaa	25380
aaatgttttta	ataagatggt	gagtagatct	aaatgaacac	caatgcacc	accgtgaaag	25440
tgaaggaaca	gaacttaaga	tgatctttga	ggcccccttg	cactttgccc	tgaaacatcc	25500
ttctgccaat	gtcccagaag	taaccacaaa	gccacttctt	cgtgtggcct	ccatgacaca	25560
cgctcctctg	ttttgtcctt	tcgctggcct	ctcctttcat	ctctactgtc	ctgcatttgg	25620
gtccctaaaa	tgttgggggt	cctcagggtt	tggtcctgga	ctcttctctg	cccctcgcac	25680
gttctgcac	cacagactac	cttgttccca	ttcattcaac	agtcacccct	ctgcccttca	25740
cccctagagc	cagctccagc	cccggacact	gccctgagct	ctggacctcg	taaagaaatg	25800
tctaccaggt	atctcctctt	ggatgcctca	gaagcacttt	aaatgcaact	tgtccaaaac	25860
tgaccacatc	atccagccct	ttcatcactc	ccaaactaa	tcttccttca	aagtctccat	25920
ctcagagagt	ggttcctctt	gttaccacag	ccacatatgt	cagtgtcatt	ttggaatctt	25980
tctcccccca	ttctccttac	atccaatcaa	tcataaataa	gttaaataatg	catatcataa	26040
accctattgc	agctaataaa	atgataaaac	aaggaagtat	aatagtctag	aagagataag	26100
tgaataacaa	aatagtcaac	taatccaaaa	gaaggcagaa	aaagaggagg	gaaaatgagt	26160
acaaagaaca	gaggagatga	ataggaaaca	aatagcagat	ggtaggttca	aacccaacca	26220
tatcaaccat	tacattaaat	gtgactgagg	taaacaatcc	agttaaaaga	caaagactat	26280
tggccaggca	cgggtgtctca	tgctgttaac	cccagaactt	tgtgaggccg	aggtgggtgg	26340
atcatttggg	gtcaggagtt	cgagaccagc	ctaaccaaca	tagggaaatc	cccatctcta	26400
ctaaaactac	cgaaaaaaaa	caaaaaacaa	aacaaacaaa	caaaaaaaca	cagctgggcg	26460
tagtggcacg	cacctgtaat	cccagctact	caggaggctg	aggcatgaga	atcacttgaa	26520
cctgggaagt	ggaggttgta	gtgagcagag	ttcatgccac	tgcacactag	cctgggtgac	26580
acagtgcagc	ttcatctcaa	aaaaacaaaa	agacaggccg	ggtgcagtgg	ctcatgcctg	26640
taaccccagc	actttgggtg	gctgagacag	gcagatcacg	aggtcaggag	atcaagacca	26700
tcctggctaa	cacagtgaag	ccccatctct	actaaaaaaa	aaaaaattaa	ccgggcgtgg	26760
tggcgggcgc	ctgtagtcca	gctactcggg	aggctgaggc	aggagaatca	cgtgaaccag	26820
ggaggtggag	gttgagatga	gtggactgca	ggccactgca	ctccaagcct	gggcgacaga	26880
ccaagactct	gtctcaaaaa	aaaaaaaaaa	aaaaaggact	agggacttac	tgacttggcc	26940
aaaggctgct	ggtgggtgct	tggaggtgct	gcctgtcagc	tgtgctctgg	gctctaggga	27000
catgggagtc	caaagggtct	tcacctctct	agtgcagagt	tctgggtggc	tgaccatggt	27060
gggatccaga	tttcagcagg	tggaccccca	gggggtgtga	ggaaatggac	tctgtgagtg	27120
ggaaacttct	tttcagagga	atttgcaaga	ctggcctgag	ccgcacacgg	ctcttcagca	27180
gggcttggca	gccagcgggg	cctcgggagg	aggcaaacag	ctgatcaaat	ccgggcttct	27240
ccagaggaag	aaggggaagg	gcaggtctgg	ggaggtcaga	gcgtgggtga	gaaccgtggc	27300
catgggtggg	atccacatcc	cagcctgcag	ggcctcctgg	tgatggttct	ccagaattct	27360
gcgattggag	ctgtgctcac	agagtcactg	tccccgacct	cccaggggcg	cggacataac	27420
ccagcctcag	ctgcagacag	cagagactct	gcacaactgc	agaagctgag	caatcagcct	27480
catcagtggc	aattcctgga	actccaacct	caactgtaac	atgagctgtg	gcagaccttc	27540
agtaacccca	gacgaggagt	gaggcagagc	ctgatagctc	agggaccagc	tgggatgctc	27600
agtaaacaa	agctccagaa	gatacgcgga	acaggagaag	gtgaagtgtg	gggacagcag	27660
gcgctgcagg	ccaccagaa	ggaggaggag	aggggacaag	aaacactgac	caggccttca	27720



agatgaggag	tgagcagaga	ggacagcaga	acatgggaaa	acctacctgg	cactatgagg	27780
gtggagaggg	gagtgttgga	gggtgtgcat	ttgagtgcaa	gtgtgtaaaa	gaggccctgg	27840
acaaggagtg	aagaatctca	tcagatgggt	aaagtgaggg	agcaccaagt	aaaccataat	27900
gaaccataag	tcagtgtgag	cccaacccta	atgctaatac	taaaccataaa	cctcgtgtgg	27960
cctggaaccc	taacctgaac	ccaaatccta	accataaacc	taaccataac	cataaatcat	28020
gtggactcca	accctaattgc	taaccataac	cctaaaaattc	aggcagaacc	gaacctaaact	28080
cgaacccaaa	ccctaacgaa	aactctaacc	ctaaccctaa	ctcaattcaa	accttaaccc	28140
taaaccatac	cataacacta	actccaccct	attccgaacc	ttaaagctaa	ttaacaatgc	28200
ctcatatgga	cccgaaccct	aaccctaacc	gaaaccctaa	ctctaaccct	aaccctaact	28260
caacccaaac	cttaacccta	accataaac	taactccaac	tacaaccata	accctaacca	28320
aaactctaac	cctaacccta	actcaaccca	aaccttacc	ctaaccataa	cactaaactcc	28380
aacaaccata	accctaaccg	aaactctaac	cctaacccta	actcaaccca	aaccttaacc	28440
ctaaccataa	caccaactac	aaccctaacc	atatcccgag	ccctaaacct	aattaacaat	28500
gcctcatgtg	ggccctaacg	ctaaccctaa	ccatgcctca	tatggaccgg	aaccctaacc	28560
cctaattcca	accctaaccc	taagcctaac	cctaactacta	accctagcca	aaaccctagc	28620
actaacctta	actccaaccc	aaaccctaact	cctaagtctc	atgttgacca	taacctggct	28680
caaaccctaa	cctgaaccct	aaccctaagc	cttgtattga	ccacagcctg	gctctaaccc	28740
taaccctgac	tctagtccct	actgtaattc	tacctctagc	cttaattcta	accctaactc	28800
caatcctaac	cctaattccaa	atgcaccctc	tgatcgcaaa	caactcttca	gccaatgtca	28860
gacctcacct	taaccgtcac	cttcacgac	accattccag	ttctcccttc	agacttccca	28920
gggacttgag	ccagcccttg	gccccaggc	cttggtttcc	ccacctgtgc	agcatggatt	28980
tggggctgag	ggtacaaaga	ctggcaccca	cctgagccgt	tggaacaggc	ctgcccctgg	29040
tcccaggagag	gactctgctc	tcccggttct	ccccctgccc	atgtggaagg	gggctcatcc	29100
ccccagcatg	ggtgcttcct	gcctgggtgc	catctctgtg	tgagttcctt	tagggaggga	29160
ccgggtaggc	gcagttggca	tggcacgcgc	atgcccctgg	ctcgggctta	tgcgggctga	29220
cagtcctgtc	cctccaccca	gaggccctc	caatgatgta	gcttatcaga	gtgtgtgtgt	29280
atgtgcacat	gtgcatgtgt	gtatgttgta	tgtgtatata	tctatgtatg	tatatgtagt	29340
atctatatat	atgtgtatgt	gtatatatgt	atatatgtgt	gcataatat	gcatttgtgt	29400
gtgcttgtgt	gtatgcatgt	ttatgtgtgt	atttgtatat	gtatctatgt	gtgtttatat	29460
gcgagtgtgc	atgtgtgtat	gcagtgtctg	tgtgtgtgt	ctgtttttat	gtgtgtgcat	29520
gtgtatagta	tatgtgcatg	tgtgtatgtt	tacatgtgtc	tgtgtgtgta	tgtatatgcc	29580
tgtgcttgtg	tgtgtgtgtg	tgtacacata	cacgtggaca	ggcgagggag	aagctgtatt	29640
gcaccaccac	ccaggccctt	ggagcccaag	tgcagtctcc	ccagggtcca	cgaggcccca	29700
gcacgtgtcc	ctcctgtcca	gatggtgccc	aaaagccctt	tgccgagtcc	tctctaagcc	29760
tcatgtagac	ccgtgagtc	cttctccgtc	tgtttcccct	gcctgtgatg	cttagggatc	29820
gttcattttca	gggccagtga	ggaaacccca	tcttctcctg	cactgccgtg	gagttaaagg	29880
agaaggccac	aacacactcc	cacgttttct	acagactagc	agtggggtgt	ttggccacct	29940
ttgggttttga	cctttttatt	tggaaatggt	cagactgaaa	taagcagaag	tgtataaacc	30000
ccttgtgccc	atcacccac	ctttggcaag	agccaaagag	tcacaactga	ttgtgcttca	30060
ccacactcca	tctatgggct	caaaatgttt	tgagataagt	gccagacatc	atataccttct	30120
atctacaaaa	aatgccacat	gaataaaaaga	taaggacttt	taaaaacaca	tgaccacagt	30180
aagcattatc	acatctagcc	aagaaatgaa	cctttcctta	attgcaacaa	acaggagtta	30240
actttttacat	tttctctact	tctacaattt	tttagagaac	agtaaggtag	actttattca	30300
acggaggcta	ccacaatgga	gttttgcagc	aggggaaggga	gatgaggctc	aattcccacc	30360
ttatacgttt	ttaaaaagag	cttatttggt	tgaattggat	ctgaggagtc	tggctgcagg	30420
ccaaaatcct	ctgtgtgac	attcaggccc	aaccgcagtt	gttgccagca	ggccccacag	30480
gagaagcagc	cctcctgccc	cagacggcac	tttccacct	tagcctcctc	cacggttccc	30540
caggccagat	ccttttgttt	gagccttctg	tttcgcctgc	ttggtagtga	gatcatctcc	30600
ccatctgcct	gatgtcatcc	agggggcaaa	aatgggacgt	agaggagccg	gcaccttttt	30660
ccttctgttt	gcctcttgcc	tgcactattg	cagtcgtgaa	tacaggcctg	agggtgacct	30720
tccattgggc	tcgtgggtccc	aacctcgaca	gcagtgactc	cacaggatgc	atagcagggtc	30780
cccgcgggtcc	cggccgacat	acctgttggtg	ttcttaggtg	gcagcttcc	cctccgtctc	30840
tctattcccc	tcctaggtct	cttgccctgt	gcagcttcc	gcagactgga	cttgcaaagt	30900
ccagcctgta	tggctggagt	tcccatgct	gccaactctc	tgtcgactgc	gagtcagctc	30960
cgatacttca	ccagattcag	gtgagagttt	tggttttttg	acaagcccac	ttcatcagca	31020
ggactatgcat	ttctgccagg	gggtcatga	tactctggtg	tctctttgtg	aggccagcag	31080
ccaccaatga	tcacgaatgt	ggcaggaagc	tgccaagaga	ccccccagtg	ggtgattcct	31140
gcctcctgct	gtcatgcaat	tccctcctga	aggggtggctg	gacttactca	cttataacaa	31200
acaatacagt	aaaaaaaaaa	aaaaaaaaaa	aaagtgatgt	gttgtctctt	ccgtgattag	31260
gttgaaagag	accatggcat	ctgtcttgga	tgcatactct	ctctcgctgg	ctctggggta	31320
gccagatgcc	atgctgtgtg	ctgccctgtg	aagaggcatg	gccagtaagg	aactgagggc	31380

aggaaccagg	gaagatttgg	ggtcctcagg	ccagctgccc	attgggaatg	aaactctacc	31440
aacagccacc	tgggggagct	ggaagtgaat	ctcatcttag	ctgagccttc	tgatgagact	31500
gcagccccag	ctgacacctg	gattgcagac	tcataaaga	cctgaaactc	taccaacagc	31560
cacctggggg	agctggaagt	gaatctcttc	gtagctgagc	cttctgatga	gactgcagcc	31620
ccggctgaca	cctggattgc	agactcatga	aagacctgaa	actctacca	cagccacctg	31680
ggggagctgg	aagtgaatct	cctcgtagct	gagccttctg	atgagactgc	agccccggct	31740
gacacctgga	ttgcagactc	atgaaagacc	ctgagcagag	gacccagttt	ggcagagccc	31800
gaattcctga	cccacaggaa	ctgggagata	aaactctgtg	gttttaactc	tctcatttta	31860
gaggtaatth	ttttgtgtag	caataggtag	ctgacaatgc	acagctaaaa	taatagataa	31920
ttaaccctaa	tgctagtttc	attcatccat	cagggtttgc	aaagtagtga	tattctactt	31980
ctgtcttctc	tcattattta	ttagcagaaa	tgtatctata	aaaagaagtg	ttccttcatt	32040
aactccttgg	tcattgttgg	gtacagtttg	cataggaaa	gcagggcaaa	tgcttgattc	32100
tttcccttcc	tttctcatt	tataaaataa	tgaactgttt	tcctggcatc	tttcaacaat	32160
gagtaattag	tttttaagt	ataattacaa	gttcatgagt	ttaaacattt	tttgatgttc	32220
ccattaacat	tattatcctt	attgatattc	agatcttctc	gtctttgtcc	agtgccagcc	32280
tatttgattt	aactcctgag	cccccttggc	actgccctaa	taactcttga	cagctacttt	32340
gttctctggc	ataagaagac	attccagaat	tacattagac	atttcctaac	ccagattgga	32400
cagcatacac	ttctctccaa	gagccccctc	tcctcttcaa	gagaaatggg	acttagagac	32460
cacagtctgg	gtgttaggtg	tgcttgtggg	tactggattt	gtcgtcattt	ttaggccttg	32520
tcagtggaca	gaactaaggc	tttttttttt	gaaagacaca	ttatgagtac	aaatggatac	32580
tttctattta	aattcggatt	tacatagttt	tacttaatac	ttattgataa	tatatctgca	32640
tctcctttct	cccacaccaa	aaatctcaaa	caatacccaa	catagttatt	catttgtttt	32700
atcctgtaac	acacacaata	ttttcaaaat	gactttacca	acactaccat	caacagtata	32760
taaccactga	aaatagttht	aaattatttt	tagatacttt	taaagtctct	gggttggtgc	32820
gacgtacaga	caaaacagtg	ttttaaaatt	atttggaaaa	tgattactta	aaataatgaa	32880
aacttctttt	gccattcttt	cttggtgtca	ggctatatgg	atatacatcc	aaatgactgg	32940
attttaaaaa	cacttggaag	agtttggtag	gttcatattg	tcaaccata	atgcaagtca	33000
gttagtttca	ttttgctttc	aattttaaga	attcctttta	caagttaatt	taattaaatt	33060
aagtaattac	acaaacattc	gacatgagtc	taaatccaaa	tctagaaacc	aagatattgg	33120
cacagaagtc	cgtccctatc	cccatcccat	ttccactgt	ttcctacagg	taacagttht	33180
attttaaagc	aattttgtgg	cttatctttc	catttgtaaa	acatacagct	gatggctcca	33240
tctaaaaaca	catcaattgt	ctatatgtac	ataaacatgc	tttttttcat	ttacaaatac	33300
attctggaga	tgaccatatg	acagtgtgta	gaaatatttc	tcctctctct	ttgcaagtgc	33360
tcagtgtcct	gtgggtgtgaa	cacgcttcat	tcaacctggg	cccttgggag	agatgctgag	33420
tggttcccgg	gctgtcccca	ctccacaccg	tggcagtgaa	gagctgctga	agtacatgct	33480
tcatagtcct	gcgtctctct	gtgagtacat	tcctagaagt	gggtttattg	ggtcaaagag	33540
taaatgcate	tctaatttgg	ctaagatatt	gccaaatcca	cctgectggg	ggtttgtgcc	33600
accttagaga	tcagtgatca	atgggtgata	tcaggagacg	tctttctatt	gtggtcagac	33660
tcttggtatt	tgacctgact	aatggaggag	aaatgggtgt	gcagtgaact	tttgatttgt	33720
gtttctcttt	ttatgatcgt	tttgagctta	atttgtgttt	ctctttttat	gategttttg	33780
agcatcgttt	cgtatcttta	aggagcaatt	tacatctcct	ctgtgagcgt	ctactcccat	33840
ctctatcagc	aggcgtcttg	cctggctccg	gaggaagtgt	ctctgaaggc	tggtgggtccc	33900
aggatagggc	aaaagaacgg	gagtgagaac	tctccacaca	gtgcttcttc	tggggtttaag	33960
gacccctctg	ctcagtggct	cctgggctgt	attaaacttt	gccatttctc	gggcccattc	34020
tagacaggct	gctgcaagcc	agccaggccg	ggatcctgct	gccccgggga	ggacgtgggg	34080
aaaatccctg	ctggagggac	tgcccccttc	ttgtccagcc	actgggtgtt	tatggttcag	34140
tttagggcgg	ggatgacagc	acacgacaca	cactccgctc	tcaagagtta	ctcctccctc	34200
cccgcagac	tcccccaacc	ggagggtctc	ccagagtgga	ggaccttcca	gctggctggca	34260
ggcggcctca	ggcaggcagt	ggggagcctc	tgcagggttc	cgagccagga	agtggcactt	34320
aggagttagg	atcttaggag	cggggctctt	ggacaggagg	gcgagttagt	tgggagggcc	34380
tcaagcgggg	acccgatggc	tctctctgct	gagaaggagg	ggccctaggg	atggggacag	34440
agagctggca	gttgaagggc	caaggagcag	gcagcttccc	agtcacagag	ccttgtgcag	34500
aggaagggga	aggagtccga	gagggtggcc	ctgctgtcca	gggccaaaga	aagggaaagc	34560
cgctggaaat	agcagaaacc	tggtctgggg	agcaccaca	gcccaccccg	aggccaggtg	34620
gggacccag	gggggcatct	ggcagcagtg	ggctccacag	agcaggcagt	gggagccatc	34680
agggttagtg	agctggcggg	gggtggccag	gggctggggg	cacctgccct	cagcccaagg	34740
agcctcttct	ggccttttgt	ggccagggct	gggatctccc	tgctgggtggc	cagatgcctc	34800
gacaccccat	aggctgggtg	aaggtggggc	aggagtcca	aggcgtggag	acggcccttg	34860
agtggccagg	ggcctcctgc	tgcagggtgg	cagagctgga	ggctccactg	tgagggtgcc	34920
tggtgaaggg	aggcgtgggc	acgggggagg	cagggaaagg	ccctgggtgc	gacttgagac	34980
ccctcagacc	ctctcaggac	ccctcctgcc	cccatcgtgg	tcctctcagg	gccccctcag	35040

atcccttcca	gacccctggg	accccggtgc	ccctgctcgt	cctgcggtgg	tgcccagctc	35100
ctgccaaggg	ccctgcactt	gggctgtggg	gacccctcgt	ggggatgggg	ccatcacagg	35160
aggctgagca	cagggcgggg	tcttggtcgt	aggggacctt	aggccacagg	tgctagtctt	35220
ctgcagccac	ccccaggac	ccctgcccgc	tacctctctt	gccccacagc	tgacaggctt	35280
tgccctcccc	tgccctctcg	tgccacaca	ctcagttctc	tatacacttt	tattatggaa	35340
aacatcaaat	acacacaaaa	gcagggcac	taggacagag	accctgtgtc	ctgggtccca	35400
gcccctcaca	gtgacaccgc	caggctttag	gcaagatcag	tgggggaggg	gagtttccca	35460
gcaggacgtg	cacttccaga	cctgggtctg	tgaagagggg	aacagaaagt	gctgaggggtg	35520
acagggaaac	ctcgagaaga	gggaggtgta	ctcacatcct	ctctcggggg	ccacaactga	35580
gccccacac	agaggacccc	actgggtctg	ctgagctgct	gggtgggcaa	gtgaggcact	35640
ggcctcgggg	gcacagcgct	tgaagggaca	ccagaaaaac	agtcataaag	ataaacctga	35700
atgtgttgtt	ttattttctta	tttattttatt	tattttatttt	tgagatggag	tctccctctg	35760
tcgcccagcg	tggagtgcag	tggcgtgac	tcggctcacc	acaacctccg	cctcccgggt	35820
tcaagcaatt	ctcttgttct	cagcttcccc	agtagctggg	actacaggca	cgcgccacca	35880
cgcacagcta	atTTTTgtat	tttttagtaga	gatgggggtt	caccatgtcg	gccaggctgg	35940
tcttgaactc	ctgacctcgt	gatccccctg	cctcggcctc	tcaaagtgtc	gggattacag	36000
atgtgagcca	ctgcacccag	ccaatgtgtt	gttttagtaa	acaaaaacta	tgcaaaggac	36060
gcatgaggat	ccaagcgact	catttaggat	ggcagcttca	ctgcaaaagg	agtctcgatt	36120
cagacctcaa	gacatgcttc	gtgggtctca	ctcaggaagg	aagtggaggc	aagtcagaat	36180
gtggtgagaa	gagaggggtt	attgaaagtt	gctccattac	agagcagggg	gtcgtcagaa	36240
agcaagaggg	ggaacacccc	agcttttaact	ttttctcata	caggggtctc	gtctgtgtaa	36300
agactaagct	aaactgtgcc	taacatgtat	tattctattg	atttaaagaa	aactgtctgt	36360
cacggggtct	tgctctgttg	caaccaggct	ggagtgcagt	agcacgatct	cagctcattg	36420
caatctctgc	ctcccaggct	cagggtgctc	tccgcctta	gcctcctgag	taactgggat	36480
tacaggcatg	cacccccatg	cgtggcta	tttttttttt	tttacttttt	gtaaagatgg	36540
ggtcttgc	tggtgcccag	gctggtctca	aacttctggg	ctcaagccaa	cctcccacct	36600
tgccctccca	aagtgtcggg	attagaggcc	tgagccaccg	cgtccggcca	agggtagttg	36660
tctggaaagc	atatattgtt	ctggatacca	gggcacttgg	acactttgct	gtcatagaag	36720
tgtgtccacg	caggcgctcac	tggtgtgtgc	ttaagtgtga	aacatcgat	gaccatgggc	36780
tgtggctggc	aggtatgtgc	ctcattgggc	tcaaggtgga	gctgaacgta	aacggctttt	36840
ctctggctct	cccaggctcc	tgcttccctg	acatccccct	acagacttcc	cttcaaagca	36900
gggctgtcca	atcttttggc	ttccccgggc	cgcattggaa	taagaagaat	tgccctgggc	36960
caaacatgaa	atacactaac	actcacgata	gctgatgagc	aaaaaaaggt	ctctgcgtaa	37020
atctcataat	gttttaagaa	agtttacaat	ttgtgttggg	ccacattcaa	agcccgagc	37080
ccgagtgttg	gacaagcttg	ctgcagaggc	tcccctagat	agggctgcag	gggtggcgct	37140
cggcagctct	agctggagaa	gcaggaggaa	gggcaggaag	gaatcctgtt	cggagctctc	37200
gcgtcacaca	tacagcccag	cgggggtgaag	tgggaggggc	tggcgctgct	gcagggggct	37260
aaccttgggg	gtgagggggc	agcctcggag	aggaagctgc	ccaggagcag	aggctggggg	37320
cggagggccc	cgggcagctg	ccccgtgccc	acagcaggac	cctggctgcc	agttctccgc	37380
agagggccag	gtggtctgaa	gctgcccagc	agggagagaa	caggcctggc	ctggactgga	37440
aacctgccat	ctggcctctc	tgaacctggg	gactccgggt	gtcctcgaag	aagggcctga	37500
gcagcagcag	aggaccccag	gcgactgcct	gagccgggcg	ccgacgacga	ctgagcacct	37560
gatacgtccc	cggcactcgc	agccccgcgg	ccggagtcgc	tgtgggtgag	cggctcgtcg	37620
gcttcacaga	ggcggggctc	tgtgccaggg	ccccgacagg	gcaggaagca	gatagagtcc	37680
cacaaggcac	aagcccagtg	cgcagaaaag	gttactttaa	aataagttct	gtgataaaa	37740
caaacagggt	gaagggtctg	aacaggtcat	gaggggtcaa	acaggtcgtg	agggcgcaaa	37800
caggctcgtg	gggcgcaaac	aggtcgtgag	ggtgcaaaac	ggtcgtgagg	gtgcaaacag	37860
gtcgtgaggg	tgcaaacagg	tcatgagggc	gcaaacagggt	cgtgagggtg	caaacagggtc	37920
gtgagggcgc	aaacagggtc	tgaggggtgca	aacagggtcgt	gaggggtgcaa	acaggtcgtg	37980
aggggtgcag	tttggggaga	gagggggcct	gggggtgagc	ggggagctag	gagagaaaca	38040
gcgctctgga	ggggcccggg	caaggcctgc	ctgagtgagg	gggggcagag	cacgagggcc	38100
caggctccag	gctgggtggg	actgccctga	agtgcctgcg	gagacagcca	aggggcagat	38160
ggagagaggt	aggggggtgg	ctggggacag	cgtttcctgt	acacaggtgg	aacctggcgc	38220
caagggggccc	ttcccagaga	cagtcagagt	ctctaaatgt	ccagtttctt	ccccagtcct	38280
acacagccca	gaagaatccg	ctgggaccat	gtggccctgc	ccagtggggc	ttcccttcca	38340
gtgtgtgagg	agcacagggt	ccaggccacg	tcagggaggc	caggcctggg	ggggacgggg	38400
tgccccaggg	cactgctggg	gaggagtgat	gcccagcaga	gggggcacgg	tgaggttcat	38460
ggctggcctg	gtggtggggg	gggtggggga	gctctgcagg	gcctggctc	tggtgggctg	38520
ggtaggcctg	cttggggcac	catctgatct	gccagaggtg	gaaggagcac	tcctgggaga	38580
tgccgtgccc	tgcacctcca	gtccctgctt	gacggcgggc	gggcttggac	tgatcaggtg	38640
ccgtgccttc	tgctgacccc	agaggccaga	ccctgtggcc	agagtgaggg	atgggagttg	38700

agatcgggcgc	gatgaaaacc	caaactctgag	cctcctgccc	gaggatgagg	ccctctccca	38760
atgaacatca	tggcccatgg	agactgggca	gggaacccaa	gggcgcacac	tggggactgg	38820
gcctggaggg	acagccgggg	aagcaggagg	aagggcagga	aggacagcag	gaggaagcag	38880
gaagaaaggg	acaggaacca	ggcccgggat	gacagcagag	aaggaccaat	gcccagccag	38940
ggcttctctca	cgtgcctctg	ggtagagagc	cctggtctgg	ctcaggaggc	ccggcactg	39000
gtctcagacc	tgccaccacc	tgtgtgacgc	tgggccaagc	gcttcccttc	cattggcgctc	39060
cgtttccacc	gctgtaaagt	ggggaggggt	gaaactgaag	ctctccccag	cctatcccag	39120
ccgttgagga	gggtagaggct	gggtgcaggg	gctgtggggc	ccacgttgag	gagacgaggc	39180
tcttgccctc	agggtggaca	ggggccagga	agggggtgct	ctgcaccatg	ggggcgcagc	39240
ctgggcctac	gggctcccc	accatgagct	cagaaggaag	atgtccgctg	aggagtggg	39300
ggccagggag	aatattctag	accagatagg	ggtggtctgg	gtaggcttct	gagggggtgg	39360
gcttgagga	ggggccggtg	gccaaatcgg	ggggaagcag	gggaggagcc	agcctgcctg	39420
cgtgtgcctc	tacctgtgt	gcattggcgt	gtgcatgtgt	gtgtgcatgt	gtgccagcgt	39480
gtgtgtgtgt	attggaaggc	gcccacggag	cgtgtctgca	tgaaccagga	tgagtgtgcg	39540
tgtgcaccc	tgtcttgggg	ctgggcatag	ggcgctgggg	agggcgagct	gaccgcagac	39600
cctggagggg	ctgggcccctg	ggaaggtttc	cgagatgaca	gggcagaagt	gggctgggga	39660
ggaggaaggc	tccgtggggc	gggctggagc	gtctctgggt	ttgctgtctg	tctctcacgc	39720
tgttccaga	acaaatgtgt	gccctcagca	aggatgctgg	ctcttcagag	gtgtcagcac	39780
aggcagccgg	caccccactt	ccctcccaga	aatcccccac	gccctctagc	tggggctggt	39840
gcaggagcag	tggggaaact	ctgttacccc	tgacctgctg	ccgtcagtca	gccgcccgc	39900
ccccacactt	aaggaggggc	agagtcaagg	accagccctg	aggggtggct	caccccagct	39960
tcacttcccc	cagcccttct	cagacagcca	ctgtgcaggc	tttggcagcg	ggggtcacac	40020
actccaccgc	ggaggccaaa	gctgcatgca	ggtcagtgcc	gccactgcc	ctaggggcct	40080
cccagcgggg	caggggcatg	gtgggggtct	cagagtgggg	cgaggctgtg	atgggggtct	40140
cagagcaggg	tgaggctgtg	ttggggctct	aggtgggctg	aggctgttgg	ggtctcaggg	40200
gtggctgagg	ctgatgaaga	cttgagacct	gtgtctgggt	agcagcttgt	tggagtgtgg	40260
gatgtgacat	ttaaaaacaa	gaataaagaa	taccccgctg	tgtggccccg	aggtgagcag	40320
ctactttggt	gaactcgtgt	cactcacagc	cccatcctgg	gtcctggggg	gtggtgtgct	40380
gtgtggggcc	caggcccagt	ggggtcacag	gtacggggga	ctctgtggcc	tggggccagt	40440
ggatctgcac	ctcactcgct	gccccacgt	cttcagcagt	ggttggggcc	tgtggtctca	40500
atcccagcc	agccaggcac	tctggggtct	gggcgggtcc	cgggtccaga	cagggggaag	40560
ggctggggag	gggctctggt	gtggctggat	cgcccgctca	tggccaggtt	tctctcctgg	40620
atcactcagt	gcagaatcaa	agggcacttt	tctgcttttg	tgtgcagaag	ccgagggtga	40680
ccttgtcatc	agaaggggaa	gtggggcctc	agaggcgtgc	tgtgggtcc	aatccccaaa	40740
gcctcctggg	caggaagtgg	aagggcccca	tccccacggt	ccctggcagc	gggagctccc	40800
tgaggctgat	ggtgctgggt	tctgtcgagg	aagacaggcc	tgaggagctg	aggcgggagg	40860
ccagctacgg	tccacggcct	ggacacagat	tctctgvcgg	gactggggca	gtaggtgggc	40920
atctgtctg	gccatgttag	ctcccagggg	ccccatgcca	tctgggctaa	agcctggggc	40980
ttgatttct	gaacttttct	gggaggcact	ccacgggcga	gacaaggacc	catgaacagg	41040
gcacttcttc	gaagcctacg	tgcacctcga	aactcttgca	acatttgcat	ttttctccct	41100
aatagttcag	tgtttgttt	attataaaca	ggaaaattta	aatattgtag	ttagagtttt	41160
tttcttcttc	ttagagatgg	ggtttcactc	tgtctcctaa	ggctggagtg	cagtgggtgg	41220
atcatagctc	acttcagcct	caacctcctg	ggctcaagcc	gtcttctctg	ctcagctctc	41280
cgatagcac	gcatcaccag	cccagctaatt	tttctgtctt	tttttttttt	tttttttttt	41340
tttttttgta	gagacgggt	ctccctgtga	tgccaggtt	gttcttaaac	ttctggcctc	41400
aagtcatcct	cctgtctcag	cctcccaaag	tgttgggatt	acaggcatga	gccaccgtgc	41460
ctgcctgcag	ttaaacattc	ccccacaaaa	tactggggcca	caccgaggct	agtatgaaag	41520
ttgcagccct	gggtatgtgt	gacctgagag	ccccttggca	gccatgggga	gcgatggggg	41580
aagctggggc	aatgggaagg	ggtctaggca	cacgagccct	cgggtcctca	cctcccacga	41640
ggcaggggtcc	caggctgcct	ctactcaagg	tggggcagca	aaagaatcgc	cctctagctg	41700
tgcagacccc	ctccccctcc	aggctgcac	accgcccag	gctggccctg	gacttctggt	41760
ggattcaagt	accaggtgg	ggagatagg	aggccagctg	cacggagccc	tccccaacgc	41820
acagtccgtg	cccagctcag	gtgcctctga	gggtgagatt	ctagcagggt	tctgggatct	41880
cctggccccc	agcgggggct	gccacaggag	tataggccca	acaggaaggg	aagatcccag	41940
cgattgggtc	cagtgggttc	tggggatgtc	ctcggagcct	ggcctggctc	agggtccctc	42000
caaaagtccc	tggaaagagg	gtgaagtgtt	gctcatgaat	cagagagaaa	gcaagcagga	42060
ccctcaagaa	gggaggagag					

gaccttttgt	gctcctctgg	gcagagggag	gaggcagagg	gaggaggaag	gcccttcgct	42420
gtgggctgag	tccttcccac	cttccatacc	agcccagcag	gaagccactg	caggatgccc	42480
cagaggacag	cctgatgggt	gggggagagg	cttctcccgc	cctcaccctt	ccgggttctt	42540
cctggaccca	ctgagtaacc	caggtgggtg	gacgtgtggc	tgtgagtcct	ggactctggg	42600
cgctcaccag	cagctccgtc	tcacacctgc	ctgcgtgtga	caccagcacc	ccttatgatg	42660
aggaacaag	tttgcccagc	tgcaggggtg	gccgagtcag	gatgactcta	gcccgtgtcc	42720
tggacaccag	accctgcccc	ggtccagccg	gggctggctt	cagccttctt	gggctatgtc	42780
gcgaggggtg	ttggggacag	cgagaggctg	gcgtggacag	tggaggggtg	actttgtggg	42840
tggctctgat	agtacggag	aggaggatac	tcagctccac	ccctgggcgg	cccctgagca	42900
gcacggctgg	gcctgaaggg	gcagggctgc	cgtcacaggc	tctggcccc	gggagctcaa	42960
gggggtgaatc	cctgatcccc	ggtgtggggc	tgggatgggg	cctcaggctg	atgcaggcag	43020
gacctccaga	gctcaggact	gggtgggtgg	gctcacaggg	aggtaggggc	aggccagagt	43080
cccagctgtc	ctggactctg	ctgtggggaa	gggctgatgc	agggtgtggg	tcaaagtgtg	43140
gtgcctcctg	cagccgggtg	ccaggagggg	tggagggggc	accctgggct	ttgtccggga	43200
gcctgggtctt	cccgtccctt	ggctgacagg	tgtgtgtgcc	tctgagccct	ccctgctaag	43260
agctgtgtgc	tgggtaaggc	tgggtggccct	ttgggctccc	tgtccaggat	ttgtgctctg	43320
gagggtaggg	cttgtctggg	tggggacttg	aggggaacgt	ggagctcctt	ctgcctcctt	43380
tcctgcccc	tgacagcagg	cagatcccag	gagagaagag	ctcaggagat	gggaagagga	43440
tctgtccagg	ggtagacact	caagggtgac	ttggagtctt	ttacggcacc	catgctttct	43500
ttgaggagtt	ttgtgtttgt	gggtgtgggg	tcggggctca	cctcctccca	catccctgcc	43560
cagaggtaggg	cagagtgggg	gcagtgcctt	gctccccttg	ctcgtctctt	gctgacctcc	43620
ggctccctgt	gctgccccag	gacctgaat	ggcactaca	acacctgtgg	ctccagcgac	43680
ctcacctggc	ccccagcgat	caagctgggg	ttctacgcct	acttgggcgt	cctgctgggt	43740
ctaggcctgc	tgtcaacag	cctggcgctc	tgggtgttct	gctgccgcat	gcagcagtgg	43800
acggagaccc	gcactctacat	gaccaacctg	gcgggtggcg	acctctgctt	gctgtgcacc	43860
ttgcccttcg	tgtgcactc	cctgcgagac	acctcagaca	cgccgctgtg	ccagctctcc	43920
cagggcatct	acctgaccaa	caggtacatg	agcatcagcc	tggtcacggc	catcgccgtg	43980
gaccgctatg	tggccgtgcg	gcacccgctg	cgtgcccgcg	ggctgcgggt	ccccaggcag	44040
gctgcccggc	tgtgcgcggg	cctctgggtg	ctggctcatg	gctccctggg	ggctcgctgg	44100
ctctctggga	ttcaggaggg	cggtcttctg	ttcaggagca	cccggcacia	tttcaactcc	44160
atggcgcttc	cgctgctggg	attctacctg	ccccgtggcg	tgggtggtct	ctgctccctg	44220
aaggtggtga	ctgccctggc	ccagaggcca	cccaccgacg	tggggcaggc	agaggccacc	44280
cgcaaggctg	cccgcatggg	ctggggccaa	ctcctgggtg	tcgtgggtct	cttctctgcc	44340
ctgcacgtgg	ggctgacagt	gcgcctcgca	gtgggttgga	acgcctgtgc	cctcctggag	44400
acgatccgtc	gcgcctgtga	cataaccagc	aagctctcag	atgccaaact	ctgcctggac	44460
gccatctgct	actactacat	ggccaaggag	ttccaggagg	cgtctgcact	ggccgtgggt	44520
cccagtgtca	aggcccacaa	aagccaggac	tctctgtgcg	tgaccctcgc	ctaagaggcg	44580
tgtgtggggc	gctgtggggc	aggtctcggg	ggctccggga	ggtgctgcct	gccaggggaa	44640
gctgtgaacca	gtagcaagga	gcccgggata	agccctgaac	tcactgtgta	ttctcttgga	44700
gccttgggtg	ggcagggacg	gcccaggtag	ctgctctctt	gggaagagag	agggacaggg	44760
acaagggcaa	gaggactgag	gccagagcaa	ggccaatgtc	agagaccccc	gggatggggc	44820
ctcacacttg	ccacccccag	aaccagctca	cctggccaga	gtgggttctt	gctggccagg	44880
gtgcagcctt	gatgacacct	gccgctgccc	ctcggggctg	gaataaaaact	ccccaccacg	44940
agtcagtcct	agtggggccc	tctgtgtttc	gcactcgtgt	ggtgggaggc	agggagggag	45000
cgctgtggct	ggagggctgg	cggacatctt	ccagggaccc	ttcggggctc	ttcactttga	45060
ggtccccctt	ggaccctttc	accccttccc	acccccacc	acctggagcg	tgagcagggg	45120
ctgttggaag	ctcctggcag	gaccacagta	gagggcccca	gcccagggtt	ccttgctcaa	45180
gacagggctg	ggcagcagct	atctccatgt	agggcctgca	cagcgggtga	aggggggggt	45240
accaagggtca	agcaggtgag	ggtgggttgg	ggtgggtggc	agtgaagggg	gtggccaggg	45300
tctgtcaagg	aaccacagcc	tcttctcctt	ccttcaggga	aaggttgga	accatgtctg	45360
gcaggggag	gggttgggtg	ccactcagg	taaaggcacg	atgtcctgct	ggtttctgcc	45420
tctcctgtac	tcctgcatgg	agggcatctc	gaaacccaag	ctggaaggac	agggcactcc	45480
agagacctcc	tgtgagtgtg	ggccagcacg	gcctgggtct	aaaccccatc	ctgtcatccc	45540
atattgcatg	tccacaggca	ccgccccacc	ctgttccatg	ttccacagga	ctggagagag	45600
atggcagtcg	tgttctggca	gggacatggc	acaagcatgc	ggctgatggc	atctcacagg	45660
acccaggct	cggtagggcc	catgcccagg	agagcccat	aagggtctct	tgccataaaag	45720
ggtgcatgcc	caggtagggc	catgcccagg	aagggtccatg	tctagggggg	ttccgtgccc	45780
aggaagggtcc	atgcccagga	tgggtccatga	gcaggagggc	ctcattccca	ggaggggtcc	45840
gtgcccagga	gggtctctatg	cccaaaaggg	tcccatgtcc	aggaggggtcc	atacgcaagg	45900
gtgtccatgc	ctgggtgggg	gggggtctat	gtccaggagg	gtcccatgcc	tgggaagggtc	45960
catgctcagg	aggggtccatg	cccaggagag	tttatgccct	ggagggcccc	atgcccggga	46020

gagtcacgtg	cacagagggc	cctgtgctca	ggaggataca	tgtccaggag	tgtccctgtc	46080
caggaggctc	catgcccagg	aggtcccatg	tcaagaaaga	ttcatgccta	ggaggggttca	46140
tgcccaggag	tgtccctgcc	taggaagggtc	cattaccaga	agggcccatg	tcaaggagcg	46200
ttcatgcccc	ggaagggtcca	gcccaggagg	gtccatgtca	aggagggtcc	atgcccagga	46260
gggtccatgc	tgagggtgggt	ccatgcccag	gaggggttcat	gtccagaaag	gtccatgcct	46320
aggagggccc	atacacaaca	gagccctgtg	cccaggaagg	accatgtcaa	ggagaacccc	46380
atgcccata	gggtccatgc	ccagtaaggg	ccatgcccac	gagatcctca	tgcccaggaa	46440
ggcccatagcc	caggaggggtc	caagcccagg	ccagtccatg	cacaggaggg	ccccatgcct	46500
aaaagtgtcc	atgcccagga	aggtccatgt	ccagaagagt	ccatacccag	gagggctgat	46560
atgggttaggc	tttgtgtctc	cacccaaatc	tcaccttgaa	ttgtaatccc	tataataacc	46620
atagtcacca	tgtgtcaagg	gagagaccag	gtggaggcaa	ttggatcatg	ggggctgttt	46680
cccacatgct	gttctcatga	tagtgagtga	gttctcatga	gatctgatgg	ttttataagg	46740
ggctcttccc	ttcacttctc	cttctactgt	ctttatgaag	aagggttcctt	gcttcccctt	46800
caccttctgc	catgatttga	agtttcctga	ggcctcccta	gccatgctga	agtgtgagtc	46860
aattaaacct	ctttccttta	aaattaccca	gtcctgggca	gttctttata	acagtatgaa	46920
aacagacgaa	tgcatgaaat	tggtaccaca	gagagtgggg	tgctgctgta	aagataccca	46980
aaaatgtcga	agcaactttg	gaactgggta	atagtcagag	gttggaacag	tttgaggagg	47040
tcagaagaag	acagaaagat	gtgggaaagt	atggaacttc	ctagagactt	gttgaatggc	47100
tttgatcaaa	atgctgatag	ggatatggac	aatgaattcc	aggttgaggt	ggtctcagat	47160
ggagatgagg	aatttgctgg	aaactggaat	aaagggtgatt	cttgctatgc	tttagcaaag	47220
agattggcag	cattttgccc	ctgccttaga	gatctgtgga	actttgaatg	tgagagagat	47280
gatttagggg	atctggcaga	agaaatttct	aagcagcaaa	gcattcaaga	gtgctcttaa	47340
aagcattcaa	ttttatgcat	tcacaaagag	atgatttgga	attggaactc	acatttaaaa	47400
gggaagcaga	gcataaaagt	ttagaaaatt	tgcatcctga	ctatgggata	gaaaagaaaa	47460
actcattttc	tgaggagaaa	ttcaagccag	ctgcagaaat	ttgcataagt	aactaggagc	47520
cacatgttaa	tagcatagac	aatgagggaa	atgtctccag	ggcatgtcag	aggtcttcac	47580
agcaacccca	cccatcacag	gcctggaggc	ttaggaggaa	aaaatgggtt	tgctggtggg	47640
gcccagggcc	ttgctgggtt	gtgcagtctc	aggacttggt	gccccacatc	ccagcagtg	47700
ctaaaagggg	ccaatgtaca	gcttagacct	ttgcttcaga	ggtgcaagcc	ccaagccttg	47760
gtggcttaca	tgtggtggtg	ggcctgcaga	tacacagaag	tttgctgcac	tggtggaacc	47820
ctcatgtaga	acctctgcta	gggcagtgtg	gaagtgatag	gtggggttgg	agcccccca	47880
cacaatcccc	actggggcac	tgctactgct	tactggaact	gtgagaagaa	ggccaccatc	47940
ctccagaccc	cagaatggta	gatccactga	tggttggaac	catgcacctg	gaaaagccac	48000
agacactcaa	caccagcctg	tgaaggcagc	tggaaggag	gctgtaccct	gcaaaacaac	48060
agaggcagag	ctgcccagg	tcattgggagc	ccacctcttg	catgagcctg	acttgaatgt	48120
gagacatgga	gtcaaaggag	atcatttttg	agctttaagt	tttgactgcc	cacctggatt	48180
tcggacttgc	atggggcctg	tgcccccttc	attttgcca	atttatccca	tttggaatgg	48240
gtataattac	ccaatgcctg	tacccccatt	ctatctagga	tataactaac	ttgcttttga	48300
ttttatagg	ttgtaggcag	aagggactta	ccttgtctca	gatgacactt	tggtcttgga	48360
cttttggtt	aatgctggaa	tgaattaaaga	ctttggggga	cttttgggaa	ggcatgactg	48420
gttttgaaat	gtaaaagaga	catgagattc	ggaaggggct	aggagcagaa	tggtataatt	48480
aggctttgtg	tccccacca	aatctcatct	tgaattgcag	tccccacatg	tcaagggaga	48540
gaccaggtgc	aggtaattga	atcatggggg	cagtctcttc	catgctattc	tcattgataga	48600
gagtgagttc	tcattgaaatc	tgacagtttt	ataaggggct	cttccccctt	ggcttggcac	48660
ttcttcttgc	tgctgttgta	agaagggtgc	ttgcttcccc	ttcgcttccc	gccatgactg	48720
taagtttcct	ggacttccc	cagccatgct	gaactgtgag	tcaattaaac	ctctttcctt	48780
tataaattac	ccagtcctcg	gcagttcctt	atagcagtat	gaaaacagaa	taatataagg	48840
ctgcatgcca	ggcagtccca	tgctaggag	ggctcatgtc	tcgggggtccc	tcccagggaag	48900
gtccatgtcc	aggggtccct	gcccaggagg	gttcatgcct	aggaggaccc	ataccagta	48960
gagtcattgt	caggaggggtc	tattcacagc	agagttcatg	cccaggagg	tccatgacca	49020
ggaggggtct	gtgcccagga	aggtccatgc	caaccaagga	ggatcaatgc	ccaggaggac	49080
ccatgtctag	gaggggtctac	gtccaggagg	acccattccc	aggaggcat	accag	49136

<210> 2  
 <211> 672  
 <212> PRT  
 <213> Human

<400> 2  
 Met Arg Ala Gly Arg Gly Ala Thr Pro Ala Arg Glu Leu Phe Arg Asp  
 1 5 10 15

Ala	Ala	Phe	Pro	Ala	Ala	Asp	Ser	Ser	Leu	Phe	Cys	Asp	Leu	Ser	Thr
			20					25					30		
Pro	Leu	Ala	Gln	Phe	Arg	Glu	Asp	Ile	Thr	Trp	Arg	Arg	Pro	Gln	Glu
		35					40					45			
Ile	Cys	Ala	Thr	Pro	Arg	Leu	Phe	Pro	Asp	Asp	Pro	Arg	Glu	Gly	Gln
	50					55					60				
Val	Lys	Gln	Gly	Leu	Leu	Gly	Asp	Cys	Trp	Phe	Leu	Cys	Ala	Cys	Ala
65					70					75					80
Ala	Leu	Gln	Lys	Ser	Arg	His	Leu	Leu	Asp	Gln	Val	Ile	Pro	Pro	Gly
				85					90					95	
Gln	Pro	Ser	Trp	Ala	Asp	Gln	Glu	Tyr	Arg	Gly	Ser	Phe	Thr	Cys	Arg
			100					105					110		
Ile	Trp	Gln	Phe	Gly	Arg	Trp	Val	Glu	Val	Thr	Thr	Asp	Asp	Arg	Leu
		115					120					125			
Pro	Cys	Leu	Ala	Gly	Arg	Leu	Cys	Phe	Ser	Arg	Cys	Gln	Arg	Glu	Asp
	130					135					140				
Val	Phe	Trp	Leu	Pro	Leu	Leu	Glu	Lys	Val	Tyr	Ala	Lys	Val	His	Gly
145					150					155					160
Ser	Tyr	Glu	His	Leu	Trp	Ala	Gly	Gln	Val	Ala	Asp	Ala	Leu	Val	Asp
				165					170					175	
Leu	Thr	Gly	Gly	Leu	Ala	Glu	Arg	Trp	Asn	Leu	Lys	Gly	Val	Ala	Gly
			180					185					190		
Ser	Gly	Gly	Gln	Gln	Asp	Arg	Pro	Gly	Arg	Trp	Glu	His	Arg	Thr	Cys
		195					200					205			
Arg	Gln	Leu	Leu	His	Leu	Lys	Asp	Gln	Cys	Leu	Ile	Ser	Cys	Cys	Val
	210					215					220				
Leu	Ser	Pro	Arg	Ala	Gly	Ala	Arg	Glu	Leu	Gly	Glu	Phe	His	Ala	Phe
225					230					235					240
Ile	Val	Ser	Asp	Leu	Arg	Glu	Leu	Gln	Gly	Gln	Ala	Gly	Gln	Cys	Ile
				245					250					255	
Leu	Leu	Leu	Arg	Ile	Gln	Asn	Pro	Trp	Gly	Arg	Arg	Cys	Trp	Gln	Gly
			260					265					270		
Leu	Trp	Arg	Glu	Gly	Gly	Glu	Gly	Trp	Ser	Gln	Val	Asp	Ala	Ala	Val
		275					280					285			
Ala	Ser	Glu	Leu	Leu	Ser	Gln	Leu	Gln	Glu	Gly	Glu	Phe	Trp	Val	Glu
	290					295					300				
Glu	Glu	Glu	Phe	Leu	Arg	Glu	Phe	Asp	Glu	Leu	Thr	Val	Gly	Tyr	Pro
305					310						315				320
Val	Thr	Glu	Ala	Gly	His	Leu	Gln	Ser	Leu	Tyr	Thr	Glu	Arg	Leu	Leu
				325					330					335	



Cys His Thr Arg Ala Leu Pro Gly Ala Trp Val Lys Gly Gln Ser Ala  
340 345 350

Gly Gly Cys Arg Asn Asn Ser Gly Phe Pro Ser Asn Pro Lys Phe Trp  
355 360 365

Leu Arg Val Ser Glu Pro Ser Glu Val Tyr Ile Ala Val Leu Gln Arg  
370 375 380

Ser Arg Leu His Ala Ala Asp Trp Ala Gly Arg Ala Arg Ala Leu Val  
385 390 395 400

Gly Asp Ser His Thr Ser Trp Ser Pro Ala Ser Ile Pro Gly Lys His  
405 410 415

Tyr Gln Ala Val Gly Leu His Leu Trp Lys Val Glu Lys Arg Arg Val  
420 425 430

Asn Leu Pro Arg Val Leu Ser Met Pro Pro Val Ala Gly Thr Ala Cys  
435 440 445

His Ala Tyr Asp Arg Glu Val His Leu Arg Cys Glu Leu Ser Pro Gly  
450 455 460

Tyr Tyr Leu Ala Val Pro Ser Thr Phe Leu Lys Asp Ala Pro Gly Glu  
465 470 475 480

Phe Leu Leu Arg Val Phe Ser Thr Gly Arg Val Ser Leu Ser Ala Ile  
485 490 495

Arg Ala Val Ala Lys Asn Thr Thr Pro Gly Ala Ala Leu Pro Ala Gly  
500 505 510

Glu Trp Gly Thr Val Gln Leu Arg Gly Ser Trp Arg Val Gly Gln Thr  
515 520 525

Ala Gly Gly Ser Arg Asn Phe Ala Ser Tyr Pro Thr Asn Pro Cys Phe  
530 535 540

Pro Phe Ser Val Pro Glu Gly Pro Gly Pro Arg Cys Val Arg Ile Thr  
545 550 555 560

Leu His Gln His Cys Arg Pro Ser Asp Thr Glu Phe His Pro Ile Gly  
565 570 575

Phe His Ile Phe Gln Val Pro Glu Gly Gly Arg Ser Gln Asp Ala Pro  
580 585 590

Pro Leu Leu Leu Gln Glu Pro Leu Leu Ser Cys Val Pro His Arg Tyr  
595 600 605

Ala Gln Glu Val Ser Arg Leu Cys Leu Leu Pro Ala Gly Thr Tyr Lys  
610 615 620

Val Val Pro Ser Thr Tyr Leu Pro Asp Thr Glu Gly Ala Phe Thr Val  
625 630 635 640

Thr Ile Ala Thr Arg Ile Asp Arg Pro Ser Ile His Ser Gln Glu Met  
645 650 655

Leu Gly Gln Phe Leu Gln Glu Val Ser Val Met Ala Val Met Lys Thr

<210> 3  
 <211> 2620  
 <212> DNA  
 <213> Human

<400> 3

gactagcggg	ccggcgctact	ggcctgggtcc	agcacctgcg	gggccctcgg	gcttggaggg	60
ctgggcccggg	cggggaacgg	gcggggcggg	ccggaggcgg	cggcggctga	ctcgccttct	120
ctccgggggct	gcgaccccga	ggcaaccggc	tgcagatggg	agcccgcgga	gccgaggatg	180
cgggcggggcc	ggggcgcgac	gccggcgagg	gagctgttcc	gggacgccgc	cttccccgcc	240
gcggactcct	cgctcttctg	cgacttgtct	acgccgctgg	cccagttccg	cgaggacatc	300
acgtggaggc	ggccccagga	gatttgtgcc	acaccccggc	tgtttccaga	tgacccacgg	360
gaagggcagg	tgaagcaggg	gctgctgggg	gattgctggg	tcctgtgtgc	ctgcgccgcg	420
ctgcagaaga	gcaggcacct	cctggaccag	gtcattcctc	cgggacagcc	gagctggggc	480
gaccaggagt	accggggctc	cttcacctgt	cgcatttggc	agtttggacg	ctgggtggag	540
gtgaccacag	atgaccgcct	gccgtgcctt	gcaggagagc	tctgtttctc	ccgctgccag	600
agggaggatg	tggttctggc	ccccttactg	gaaaaggctc	acgccaagg	ccatgggtcc	660
tacgagcacc	tgtgggccc	gcagggtggc	gatgccctgg	tggaacctgac	cggcggcctg	720
gcagaaagat	ggaacctgaa	gggcgtagca	ggaagcggag	gccagcagga	caggccaggc	780
cgctgggagc	acaggacttg	tcggcagctg	ctccacctga	aggaccagtg	tctgatcagc	840
tgctgcgtgc	tcagccccag	agcagggtgc	cgggagctgg	gggagttcca	tgccttcatt	900
gtctcggacc	tgccggagct	ccagggtcag	gcggggccagt	gcacccctgct	gctgcggatc	960
cagaacccct	ggggccggcg	gtgctggcag	gggctctgga	gagagggggg	tgaaggggtg	1020
agccaggtag	atgcagcggg	agcatctgag	ctcctgtccc	agctccagga	aggggagttc	1080
tgggtggagg	aggaggagtt	cctcaggagg	tttgacgagc	tcaccgttgg	ctaccgggtc	1140
acggaggccg	gccacctgca	gagcctctac	acagagaggc	tgctctgcca	tacgcggggc	1200
ctgcctgggg	cctgggtcaa	gggccagtca	gcaggaggct	gccggaacaa	cagcggcttt	1260
cccagcaacc	ccaaattctg	gctgcgggtc	tcagaaccga	gtgagggtga	cattgccgtc	1320
ctgcagagat	ccaggctgca	cgccggcgac	tgggcaggcc	ggggccgggc	actggtgggt	1380
gacagtcata	cttcgtggag	cccagcgagc	atcccgggca	agcactacca	ggctgtgggt	1440
ctgcacctct	ggaaggtaga	gaagcggcgg	gtcaatctgc	ctagggtcct	gtccatgcc	1500
cccgtggctg	gcaccgcgtg	ccatgcatac	gaccgggagg	tccacctgcg	ttgtgagctc	1560
tcaccgggct	actacctggc	tgtccccagc	accttcctga	aggacgcgcc	aggggagttc	1620
ctgctccgag	tcttctctac	cgggcgagtc	tcccttagcg	ccatcagggc	agtggccaag	1680
aacaccaccc	ccggggcagc	cctgcctgcg	ggggagtggg	ggaccgtgca	gctacggggg	1740
tcttggagag	tcggccagac	ggcggggggc	agcaggaact	ttgcctcata	ccccaccaac	1800
ccctgcttcc	ccttctcggt	ccccgagggc	cctggccccc	gctgcgtccg	catcactctg	1860
catcagcact	gccggcccag	tgacaccgag	ttccacccca	tcggcttcca	tatcttccag	1920
gtcccagagg	gtggaaggag	ccaggacgca	ccccactgc	tgctgcagga	gccgtgctg	1980
agctgcgtgc	cacatcgcta	cgcccaggag	ctgagccggc	tctgcctcct	gcctgcaggc	2040
acctacaagg	ttgtgccttc	cacctacctg	cgggacacag	agggggcctt	cacagtgacc	2100
atcgcaacca	ggattgacag	gccatccatt	cacagccagg	agatgctggg	ccagtctctc	2160
caagaggctc	ccgtcatggc	agtgatgaaa	acctaacagg	gtggccccc	gtgccagctc	2220
aggtgactgg	agcccagggg	cctgacagg	tcccagcagc	tgggcccggc	agccttgac	2280
tgtgggggct	ggtcctgagt	cttggcctgc	ctcccagccc	tgccaggggg	ctgcggccta	2340
gggggtccacg	ggaagcctcc	gtcaggagag	acgcagccct	ggggggccagc	tggtgctgca	2400
aggaaggggtg	ggaagcttgc	tggcttctgt	tcgcgccactg	agacggcaga	gaccccagga	2460
tcccagagct	tcccagatc	cctcccagat	cctctgctga	ctccatatgg	aggcctcaca	2520
cccagagggt	agggcagcag	atcttcttta	taactattta	ttgttcgaat	cacttttagg	2580
atgtaacttt	ataaataaac	atgagcgctg	atgatttgca			2620

<210> 4  
 <211> 544  
 <212> PRT  
 <213> Human

<400> 4

```

Met Arg Ala Gly Arg Gly Ala Thr Pro Ala Arg Glu Leu Phe Arg Asp
 1           5           10           15

Ala Ala Phe Pro Ala Ala Asp Ser Ser Leu Phe Cys Asp Leu Ser Thr
          20           25           30

Pro Leu Ala Gln Phe Arg Glu Asp Ile Thr Trp Arg Arg Pro Gln Glu
          35           40           45

Ile Cys Ala Thr Pro Arg Leu Phe Pro Asp Asp Pro Arg Glu Gly Gln
          50           55           60

Val Lys Gln Gly Leu Leu Gly Asp Cys Trp Phe Leu Cys Ala Cys Ala
 65           70           75           80

Ala Leu Gln Lys Ser Arg His Leu Leu Asp Gln Val Ile Pro Pro Gly
          85           90           95

Gln Pro Ser Trp Ala Asp Gln Glu Tyr Arg Gly Ser Phe Thr Cys Arg
          100          105          110

Ile Trp Gln Phe Gly Arg Trp Val Glu Val Thr Thr Asp Asp Arg Leu
          115          120          125

Pro Cys Leu Ala Gly Arg Leu Cys Phe Ser Arg Cys Gln Arg Glu Asp
          130          135          140

Val Phe Trp Leu Pro Leu Leu Glu Lys Val Tyr Ala Lys Val His Gly
          145          150          155          160

Ser Tyr Glu His Leu Trp Ala Gly Gln Val Ala Asp Ala Leu Val Asp
          165          170          175

Leu Thr Gly Gly Leu Ala Glu Arg Trp Asn Leu Lys Gly Val Ala Gly
          180          185          190

Ser Gly Gly Gln Gln Asp Arg Pro Gly Arg Trp Glu His Arg Thr Cys
          195          200          205

Arg Gln Leu Leu His Leu Lys Asp Gln Cys Leu Ile Ser Cys Cys Val
          210          215          220

Leu Ser Pro Arg Ala Gly Ala Arg Glu Leu Gly Glu Phe His Ala Phe
          225          230          235          240

Ile Val Ser Asp Leu Arg Glu Leu Gln Gly Gln Ala Gly Gln Cys Ile
          245          250          255

Leu Leu Leu Arg Ile Gln Asn Pro Trp Gly Arg Arg Cys Trp Gln Gly
          260          265          270

Leu Trp Arg Glu Gly Gly Glu Gly Trp Ser Gln Val Asp Ala Ala Val
          275          280          285

Ala Ser Glu Leu Leu Ser Gln Leu Gln Glu Gly Glu Phe Trp Val Glu
          290          295          300

Glu Glu Glu Phe Leu Arg Glu Phe Asp Glu Leu Thr Val Gly Tyr Pro
          305          310          315          320

```

Val Thr Glu Ala Gly His Leu Gln Ser Leu Tyr Thr Glu Arg Leu Leu  
325 330 335

Cys His Thr Arg Ala Leu Pro Gly Ala Trp Val Lys Gly Gln Ser Ala  
340 345 350

Gly Gly Cys Arg Asn Asn Ser Gly Phe Pro Ser Asn Pro Lys Phe Trp  
355 360 365

Leu Arg Val Ser Glu Pro Ser Glu Val Tyr Ile Ala Val Leu Gln Arg  
370 375 380

Ser Arg Leu His Ala Ala Asp Trp Ala Gly Arg Ala Arg Ala Leu Val  
385 390 395 400

Gly Asp Ser His Thr Ser Trp Ser Pro Ala Ser Ile Pro Gly Lys His  
405 410 415

Tyr Gln Ala Val Gly Leu His Leu Trp Lys Val Glu Lys Arg Arg Val  
420 425 430

Asn Leu Pro Arg Val Leu Ser Met Pro Pro Val Ala Gly Thr Ala Cys  
435 440 445

His Ala Tyr Asp Arg Glu Val His Leu Arg Cys Glu Leu Ser Pro Gly  
450 455 460

Tyr Tyr Leu Ala Val Pro Ser Thr Phe Leu Lys Asp Ala Pro Gly Glu  
465 470 475 480

Phe Leu Leu Arg Val Phe Ser Thr Gly Arg Val Ser Leu Arg Ala Leu  
485 490 495

Ala Pro Ala Ala Ser Ala Ser Leu Cys Ile Ser Thr Ala Gly Pro Val  
500 505 510

Thr Pro Ser Ser Thr Pro Ser Ala Ser Ile Ser Ser Arg Ser Gln Arg  
515 520 525

Val Glu Gly Ala Arg Thr His Pro His Cys Cys Cys Arg Ser Arg Cys  
530 535 540

<210> 5  
<211> 2297  
<212> DNA  
<213> Human

<400> 5  
ccgaggcaac cggctgcaga tgggagcccg cggagccgag gatgcgggag ggccggggcg 60  
cgacgccggc gagggagctg ttccgggacg ccgccttccc cgccgcggac tcctcgctct 120  
tctgcgactt gtctacgccg ctggcccagt tccgcgagga catcacgtgg aggcggcccc 180  
aggagatttg tgccacaccc cggctgtttc cagatgacct acgggaaggg caggtgaagc 240  
aggggctgct gggggattgc tggttcctgt gtgcctgcgc cgcgctgcag aagagcaggc 300  
acctcctgga ccaggtcatt cctccgggac agccgagctg ggccgaccag gaggatgacc 360  
gctccttcac ctgtcgcatt tggcagtttg gacgctgggt ggaggtgacc acagatgacc 420  
gcctgccgtg ccttgcaggg agactctgtt tctcccgcgt ccagaggag gatgtgttct 480

```

ggctcccctt actggaaaag gtctacgcc aggtccatgg gtcctacgag cacctgtggg 540
ccgggcaggt ggcggatgcc ctggtggacc tgaccggcgg cctggcagaa agatggaacc 600
tgaagggcgt agcaggaagc ggaggccagc aggacaggcc aggccgctgg gagcacagga 660
cttgtcggca gctgctccac ctgaaggacc agtgtctgat cagctgctgc gtgctcagcc 720
ccagagcagg tgcccgggag ctggggggagt tccatgcctt cattgtctcg gacctgcggg 780
agctccaggg tcaggcgggc cagtgcattc tgctgctgcg gatccagaac ccctggggcc 840
ggcgggtgctg gcaggggctc tggagagagg ggggtgaagg gtggagccag gtagatgcag 900
cggtagcatc tgagctcctg tcccagctcc aggaagggga gttctgggtg gaggaggagg 960
agttcctcag ggagtttgac gagctcaccg ttggctaccc ggtcacggag gccggccacc 1020
tgcagagcct ctacacagag aggctgctct gccatacgcg ggcgctgcct ggggcctggg 1080
tcaagggcca gtcagcagga ggctgccgga acaacagcgg ctttcccagc aaccccaaat 1140
tctggctgcg ggtctcagaa ccgagtgaag tgtacattgc cgtcctgcag agatccaggc 1200
tgcacgcggc ggactgggca ggccggggcc gggcactggg gggtagacag catacttcgt 1260
ggagcccagc gagcatcccg ggcaagcact accaggctgt gggctctgcac ctctggaagg 1320
tagagaagcg gcggtcaat ctgcctaggg tcctgtccat gcccccgctg gctggcaccg 1380
cgtgccatgc atacgaccgg gaggtccacc tgcgttgtga gctctcaccg ggctactacc 1440
tggctgtccc cagcaccttc ctgaaggacg cgccagggga gttcctgctc cgagtcttct 1500
ctaccgggcg agtctccctt agggccctgg ccccgctgc gtccgcatca ctctgcatca 1560
gcaactgccg cccagtgaac ccgagttcca ccccatcggc ttccatatct tccagggtccc 1620
agaggggtga aggagccagg acgcaccccc actgctgctg caggagccgc tgctgagctg 1680
cagtgccacat cgctacggcc aggaggtgag ccggctctgc ctctgcctg caggcaccta 1740
caaggttggtg cctccacact acctgccgga cacagagggg gccttcacag tgaccatcgc 1800
aaccaggatt gacaggccat ccattcacag ccaggagatg ctgggccagt tcctccaaga 1860
ggtctccgtc atggcagtga tgaaaaccta acaggggtggc cccctgtgcc agctcaggtg 1920
actggagccc gagggcctga caggttccca gcagctgggc cggccagcct tgcactgtgg 1980
gggctgggtc tgagtcttg cctgcctccc agccctgcca gggggctgcg gcctaggggt 2040
ccacgggaag cctccgtcag gagagacgca gccctggggg ccagctgggt ctgcaaggaa 2100
gggtgggaag cttgctggct tctgttgccg cactgagacg gcagagaccc caggatccca 2160
gagcttccca ggatccctcc cagatcctct gctgactcca tatggaggcc tcacaccag 2220
agggtagggc agcagatctt ctttataact atttattgtt cgaatcactt ttaggatgta 2280
actttataaa taaacct

```

<210> 6  
 <211> 517  
 <212> PRT  
 <213> Human

<400> 6  
 Met Arg Ala Gly Arg Gly Ala Thr Pro Ala Arg Glu Leu Phe Arg Asp  
   1                          5                          10                          15  
 Ala Ala Phe Pro Ala Ala Asp Ser Ser Leu Phe Cys Asp Leu Ser Thr  
                   20                          25                          30  
 Pro Leu Ala Gln Phe Arg Glu Asp Ile Thr Trp Arg Arg Pro Gln Glu  
           35                          40                          45  
 Ile Cys Ala Thr Pro Arg Leu Phe Pro Asp Asp Pro Arg Glu Gly Gln  
       50                          55                          60  
 Val Lys Gln Gly Leu Leu Gly Asp Cys Trp Phe Leu Cys Ala Cys Ala  
       65                          70                          75                          80  
 Ala Leu Gln Lys Ser Arg His Leu Leu Asp Gln Val Ile Pro Pro Gly  
           85                          90                          95  
 Gln Pro Ser Trp Ala Asp Gln Glu Tyr Arg Gly Ser Phe Thr Cys Arg  
           100                          105                          110  
 Ile Trp Gln Phe Gly Arg Trp Val Glu Val Thr Thr Asp Asp Arg Leu  
           115                          120                          125

Pro	Cys	Leu	Ala	Gly	Arg	Leu	Cys	Phe	Ser	Arg	Cys	Gln	Arg	Glu	Asp
130						135					140				
Val	Phe	Trp	Leu	Pro	Leu	Leu	Glu	Lys	Val	Tyr	Ala	Lys	Val	His	Gly
145					150					155					160
Ser	Tyr	Glu	His	Leu	Trp	Ala	Gly	Gln	Val	Ala	Asp	Ala	Leu	Val	Asp
				165					170					175	
Leu	Thr	Gly	Gly	Leu	Ala	Glu	Arg	Trp	Asn	Leu	Lys	Gly	Val	Ala	Gly
			180					185					190		
Ser	Gly	Gly	Gln	Gln	Asp	Arg	Pro	Gly	Arg	Trp	Glu	His	Arg	Thr	Cys
		195					200					205			
Arg	Gln	Leu	Leu	His	Leu	Lys	Asp	Gln	Cys	Leu	Ile	Ser	Cys	Cys	Val
	210					215					220				
Leu	Ser	Pro	Arg	Ala	Gly	Ala	Arg	Glu	Leu	Gly	Glu	Phe	His	Ala	Phe
225					230					235					240
Ile	Val	Ser	Asp	Leu	Arg	Glu	Leu	Gln	Gly	Gln	Ala	Gly	Gln	Cys	Ile
				245					250					255	
Leu	Leu	Leu	Arg	Ile	Gln	Asn	Pro	Trp	Gly	Arg	Arg	Cys	Trp	Gln	Gly
			260					265					270		
Leu	Trp	Arg	Glu	Gly	Gly	Glu	Gly	Trp	Ser	Gln	Val	Asp	Ala	Ala	Val
		275					280					285			
Ala	Ser	Glu	Leu	Leu	Ser	Gln	Leu	Gln	Glu	Gly	Glu	Phe	Trp	Val	Glu
	290					295					300				
Glu	Glu	Glu	Phe	Leu	Arg	Glu	Phe	Asp	Glu	Leu	Thr	Val	Gly	Tyr	Pro
305					310					315					320
Val	Thr	Glu	Ala	Gly	His	Leu	Gln	Ser	Leu	Tyr	Thr	Glu	Arg	Leu	Leu
				325					330					335	
Cys	His	Thr	Arg	Ala	Leu	Pro	Gly	Ala	Trp	Val	Lys	Gly	Gln	Ser	Ala
			340					345					350		
Gly	Gly	Cys	Arg	Asn	Asn	Ser	Gly	Phe	Pro	Ser	Asn	Pro	Lys	Phe	Trp
		355					360					365			
Leu	Arg	Val	Ser	Lys	Pro	Ser	Glu	Val	Tyr	Ile	Ala	Val	Leu	Gln	Arg
	370					375					380				
Ser	Arg	Leu	His	Ala	Ala	Asp	Trp	Ala	Gly	Arg	Ala	Arg	Ala	Leu	Val
385					390					395					400
Gly	Asp	Ser	His	Thr	Ser	Trp	Ser	Pro	Ala	Ser	Ile	Pro	Gly	Lys	His
				405					410					415	
Tyr	Gln	Ala	Val	Gly	Leu	His	Leu	Trp	Lys	Val	Pro	Glu	Gly	Gly	Arg
			420					425					430		
Ser	Gln	Asp	Ala	Pro	Pro	Leu	Leu	Leu	Gln	Glu	Pro	Leu	Leu	Ser	Cys
		435					440					445			

Val Pro His Arg Tyr Ala Gln Glu Val Ser Arg Leu Cys Leu Leu Pro  
 450 455 460

Ala Gly Thr Tyr Lys Val Val Pro Ser Thr Tyr Leu Pro Asp Thr Glu  
 465 470 475 480

Gly Ala Phe Thr Val Thr Ile Ala Thr Arg Ile Asp Arg Pro Ser Ile  
 485 490 495

His Ser Gln Glu Met Leu Gly Gln Phe Leu Gln Glu Val Ser Val Met  
 500 505 510

Ala Val Met Lys Thr  
 515

<210> 7  
 <211> 2001  
 <212> DNA  
 <213> Human

<400> 7  
 ccgaggcaac cggctgcaga tgggagcccc cggagccgag gatgcgggag ggccggggcg 60  
 cgacgccggc gagggagctg ttccgggacg ccgccttccc cgccgcggac tcctcgctct 120  
 tctgcgactt gtctacgccg ctggcccagt tccgcgagga catcacgtgg aggcggcccc 180  
 aggagatttg tgccacaccc cggctgtttc cagatgaccc acgggaaggg caggtgaagc 240  
 aggggctgct gggggattgc tgggttctgt gtgcctgcgc cgcgctgcag aagagcaggc 300  
 acctcctgga ccaggtcatt cctccgggac agccgagctg ggccgaccag gactaccggg 360  
 gctccttcac ctgtcgcatt tggcagtttg gacgctgggt ggaggtgacc acagatgacc 420  
 gcctgcgctg ccttgcaagg agactctgtt tctccgctg ccagaggag gatgtgttct 480  
 ggctccccctt actgaaaaag gtctacgcca aggtccatgg gtccctacgag cacctgtggg 540  
 ccgggcagggt ggccgcatgcc ctgggtggacc tgaccggcgg cctggcagaa agatggaacc 600  
 tgaagggcgt agcaggaagc ggaggccagc aggcagggc aggcgctgg gagcacagga 660  
 cttgtcggca gctgctccac ctgaaggacc agtgtctgat cagctgctgc gtgctcagcc 720  
 ccagagcagg tgcccgggag ctgggggagt tccatgcctt cattgtctcg gacctgcggg 780  
 agctccagggt tcaggcgggc cagtgcaccc tgctgctgcg gatccagaac ccctggggcc 840  
 ggcggtgctg gcaggggctc tggagagagg ggggtgaagg gtggagccag gtagatgcag 900  
 cggtagcatc tgagctcctg tcccagctcc aggaaggagg gttctgggtg gaggaggagg 960  
 agttcctcag ggagtttgac gagctcaccc ttggctaccc ggtcacggag gccggccacc 1020  
 tgcagagcct ctacacagag aggtgctctt gccatacgcg ggcgctgcct ggggcctggg 1080  
 tcaagggcca gtcagcagga gggtgccgga acaacagcgg ctttcccagc aaccccaaatt 1140  
 tctggctgcg ggtctcaaaa ccgagtgaag tgtacattgc cgtcctgcag agatccaggc 1200  
 tgcacgcggc ggactgggca ggccggggccc gggcactggg gggtgacagt catacttcgt 1260  
 ggagcccagc gagcatcccc ggcaagcact accaggctgt ggggtctgcac ctctggaagg 1320  
 tcccagaggg tgggaaggagc caggacgcac cccactgct gctgcaggag ccgctgctga 1380  
 gctgcgtgcc acatcgctac gcccaggagg tgagccggct ctgcctcctg cctgcaggca 1440  
 cctacaagggt tgtgccctcc acctacctgc cggacacaga gggggccttc acagtacca 1500  
 tcgcaaccag gattgacagg ccatccattc acagccagga gatgctgggc cagttcctcc 1560  
 aagaggtctc cgtcatggca gtgatgaaaa cctaacaggg tggccccctg tgccagctca 1620  
 ggtgactgga gcccaggggc ctgacaggtt cccagcagct gggccggcca gccttgact 1680  
 gtgggggctg gtccctgagtc ttggcctgcc tcccagccct gccagggggc tgcggcctag 1740  
 ggggtccacgg gaagcctccg tcaggagaga cgcagccctg ggggcccagct ggtgctgcaa 1800  
 ggaaggggtg gaagcttgct ggcttctgtt gcgccactga gacggcagag accccaggat 1860  
 cccagagctt cccagatcc ctcccagatc ctctgctgac tccatatgga ggcctcacac 1920  
 ccagagggta gggcagcaga tcttctttat aactatttat tgttcgaatc acttttagga 1980  
 tgtaacttta taaataaacc t 2001

<210> 8  
 <211> 513  
 <212> PRT  
 <213> Human

FDL769267.001704



<400> 8

```

Met Arg Ala Gly Arg Gly Ala Thr Pro Ala Arg Glu Leu Phe Arg Asp
 1           5           10           15

Ala Ala Phe Pro Ala Ala Asp Ser Ser Leu Phe Cys Asp Leu Ser Thr
      20           25           30

Pro Leu Ala Gln Phe Arg Glu Asp Ile Thr Trp Arg Arg Pro Gln Glu
      35           40           45

Ile Cys Ala Thr Pro Arg Leu Phe Pro Asp Asp Pro Arg Glu Gly Gln
      50           55           60

Val Lys Gln Gly Leu Leu Gly Asp Cys Trp Phe Leu Cys Ala Cys Ala
      65           70           75           80

Ala Leu Gln Lys Ser Arg His Leu Leu Asp Gln Val Ile Pro Pro Gly
      85           90           95

Gln Pro Ser Trp Ala Asp Gln Glu Tyr Arg Gly Ser Phe Thr Cys Arg
      100          105          110

Ile Trp Gln Phe Gly Arg Trp Val Glu Val Thr Thr Asp Asp Arg Leu
      115          120          125

Pro Cys Leu Ala Gly Arg Leu Cys Phe Ser Arg Cys Gln Arg Glu Asp
      130          135          140

Val Phe Trp Leu Pro Leu Leu Glu Lys Val Tyr Ala Lys Val His Gly
      145          150          155          160

Ser Tyr Glu His Leu Trp Ala Gly Gln Val Ala Asp Ala Leu Val Asp
      165          170          175

Leu Thr Gly Gly Leu Ala Glu Arg Trp Asn Leu Lys Gly Val Ala Gly
      180          185          190

Ser Gly Gly Gln Gln Asp Arg Pro Gly Arg Trp Glu His Arg Thr Cys
      195          200          205

Arg Gln Leu Leu His Leu Lys Asp Gln Cys Leu Ile Ser Cys Cys Val
      210          215          220

Leu Ser Pro Arg Ala Gly Ala Arg Glu Leu Gly Glu Phe His Ala Phe
      225          230          235          240

Ile Val Ser Asp Leu Arg Glu Leu Gln Gly Gln Ala Gly Gln Cys Ile
      245          250          255

Leu Leu Leu Arg Ile Gln Asn Pro Trp Gly Arg Arg Cys Trp Gln Gly
      260          265          270

Leu Trp Arg Glu Gly Gly Glu Gly Trp Ser Gln Val Asp Ala Ala Val
      275          280          285

Ala Ser Glu Leu Leu Ser Gln Leu Gln Glu Gly Glu Phe Trp Val Glu
      290          295          300

Glu Glu Glu Phe Leu Arg Glu Phe Asp Glu Leu Thr Val Gly Tyr Pro
      305          310          315          320

```

Val Thr Glu Ala Gly His Leu Gln Ser Leu Tyr Thr Glu Arg Leu Leu  
325 330 335

Cys His Thr Arg Ala Leu Pro Gly Ala Trp Val Lys Gly Gln Ser Ala  
340 345 350

Gly Gly Cys Arg Asn Asn Ser Gly Phe Pro Ser Asn Pro Lys Phe Trp  
355 360 365

Leu Arg Val Ser Glu Pro Ser Glu Val Tyr Ile Ala Val Leu Gln Arg  
370 375 380

Ser Arg Leu His Ala Ala Asp Trp Ala Gly Arg Ala Arg Ala Leu Val  
385 390 395 400

Gly Asp Ser His Thr Ser Trp Ser Pro Ala Ser Ile Pro Gly Lys His  
405 410 415

Tyr Gln Ala Val Gly Leu His Leu Trp Lys Val Glu Lys Arg Arg Val  
420 425 430

Asn Leu Pro Arg Val Leu Ser Met Pro Pro Val Ala Gly Thr Ala Cys  
435 440 445

His Ala Tyr Asp Arg Glu Val His Leu Arg Cys Glu Leu Ser Pro Gly  
450 455 460

Tyr Tyr Leu Ala Val Pro Ser Thr Phe Leu Lys Asp Ala Pro Gly Glu  
465 470 475 480

Phe Leu Leu Arg Val Phe Ser Thr Gly Arg Val Ser Leu Arg Ser Gln  
485 490 495

Arg Val Glu Gly Ala Arg Thr His Pro His Cys Cys Cys Arg Ser Arg  
500 505 510

Cys

<210> 9  
<211> 2204  
<212> DNA  
<213> Human

<400> 9  
ccgaggcaac cggctgcaga tgggagcccg cggagccgag gatgcgggcg ggccggggcg 60  
cgacgccggc gagggagctg ttccgggacg ccgccttccc cgccgcggac tcctcgctct 120  
tctgcgactt gtctacgccg ctggcccagt tccgcgagga catcacgtgg aggcggcccc 180  
aggagatttg tgccacaccc cggctgtttc cagatgaccc acgggaaggg caggtgaagc 240  
aggggctgct gggggattgc tggttcctgt gtgcctgcgc cgcgctgcag aagagcaggc 300  
acctcctgga ccaggtcatt cctccgggac agccgagctg ggccgaccag gagtaccggg 360  
gctccttcac ctgtcgcatt tggcagtttg gacgctgggt ggaggtgacc acagatgacc 420  
gcctgccgtg ccttgcaagg agactctgtt tctcccgtg ccagagggag gatgtgttct 480  
ggctccccctt actgaaaag gtctacgcca aggtccatgg gtcctacgag cacctgtggg 540  
ccgggagcagg ggcggatgcc ctggtggacc tgaccggcgg cctggcagaa agatggaacc 600  
tgaagggcgt agcaggaagc ggaggccagc aggacaggcc aggccgctgg gagcacagga 660  
cttgctcgga gctgctccac ctgaaggacc agtgtctgat cagctgctgc gtgctcagcc 720  
ccagagcagg tgcccgggag ctgggggagt tccatgcctt cattgtctcg gacctgcggg 780  
agctccaggg tcaggcgggc cagtgcattc tgctgctgcg gatccagaac ccctggggcc 840

```

ggcgggtgctg gcaggggctc tggagagagg ggggtgaagg gtggagccag gtagatgcag 900
cggtagcatc tgagctcctg tcccagctcc aggaagggga gttctgggtg gaggaggagg 960
agttcctcag ggagtttgac gagctcaccg ttggctaccc gggtcacggag gccggccacc 1020
tgcagagcct ctacacagag aggtctgctt gccatacgcg ggcgctgcct ggggcctggg 1080
tcaagggcca gtcagcagga ggctgccgga acaacagcgg ctttcccagc aaccccaa 1140
tctggctgcg ggtctcagaa ccgagtggag tgtacattgc cgtcctgcag agatccaggc 1200
tgcacgcggc ggactgggca ggccggggcc gggcactggg ggggtgacagt catacttcgt 1260
ggagcccagc gagcatcccg ggcaagcact accaggctgt ggggtctgcac ctctggaagg 1320
tagagaagcg gcgggtcaat ctgcctaggg tcctgtccat gccccccgtg gctggcaccg 1380
cgtgccatgc atacgaccgg gaggtccacc tgcgttgatg gctctcaccg ggctactacc 1440
tggctgtccc cagcaccttc ctgaaggacg cgccagggga gttcctgctc cgagtcttct 1500
ctaccgggag agtctccctt aggtcccaga ggggtggaagg agccaggacg cacccttacc 1560
gctgtgcag gagccgtgc tgagctgcgt gccacatcgc tacgcccagg aggtgagccg 1620
gctctgcctc ctgcctgcag gcacctacaa ggttgctgcc tccacctacc tgccggacac 1680
agagggggcc ttcacagtga ccatcgcaac caggattgac aggccatcca ttcacagcca 1740
ggagatgctg ggccagttcc tccaagaggt ctccgtcatg gcagtgatga aaacctaaca 1800
gggtggcccc ctgtgccagc tcaggtgact ggagcccag ggcctgacag gttcccagca 1860
gctgggcccgg ccagccttgc actgtggggg ctggtcctga gtcttggcct gcctcccagc 1920
cctgccaggg ggctgcggcc taggggtcca cggaagcct ccgtcaggag agacgcagcc 1980
ctggggggcca gctgggtgctg caaggaaggg tgggaagcct gctggcttct gttgcgccac 2040
tgagacggca gagaccccag gatcccagag cttcccagga tccctcccag atcctctgct 2100
gactccatat ggaggcctca caccagagg gtagggcagc agatcttctt tataactatt 2160
tattgttcga atcactttta ggatgtaact ttataaataa acct 2204

```

<210> 10  
 <211> 444  
 <212> PRT  
 <213> Human

<400> 10  
 Met Arg Ala Gly Arg Gly Ala Thr Pro Ala Arg Glu Leu Phe Arg Asp  
   1                  5                  10                  15  
 Ala Ala Phe Pro Ala Ala Asp Ser Ser Leu Phe Cys Asp Leu Ser Thr  
                   20                  25                  30  
 Pro Leu Ala Gln Phe Arg Glu Asp Ile Thr Trp Arg Arg Pro Gln Glu  
                   35                  40                  45  
 Ile Cys Ala Thr Pro Arg Leu Phe Pro Asp Asp Pro Arg Glu Gly Gln  
                   50                  55                  60  
 Val Lys Gln Gly Leu Leu Gly Asp Cys Trp Phe Leu Cys Ala Cys Ala  
                   65                  70                  75                  80  
 Ala Leu Gln Lys Ser Arg His Leu Leu Asp Gln Val Ile Pro Pro Gly  
                   85                  90                  95  
 Gln Pro Ser Trp Ala Asp Gln Glu Tyr Arg Gly Ser Phe Thr Cys Arg  
                   100                  105                  110  
 Ile Trp Gln Phe Gly Arg Trp Val Glu Val Thr Thr Asp Asp Arg Leu  
                   115                  120                  125  
 Pro Cys Leu Ala Gly Arg Leu Cys Phe Ser Arg Cys Gln Arg Glu Asp  
                   130                  135                  140  
 Val Phe Trp Leu Pro Leu Leu Glu Lys Val Tyr Ala Lys Val His Gly  
                   145                  150                  155                  160  
 Ser Tyr Glu His Leu Trp Ala Gly Gln Val Ala Asp Ala Leu Val Asp

				165						170						175			
Leu	Thr	Gly	Gly	Leu	Ala	Glu	Arg	Trp	Asn	Leu	Lys	Gly	Val	Ala	Gly				
			180					185					190						
Ser	Gly	Gly	Gln	Gln	Asp	Arg	Pro	Gly	Arg	Trp	Glu	His	Arg	Thr	Cys				
		195					200					205							
Arg	Gln	Leu	Leu	His	Leu	Lys	Asp	Gln	Cys	Leu	Ile	Ser	Cys	Cys	Val				
	210					215					220								
Leu	Ser	Pro	Arg	Ala	Gly	Ala	Arg	Glu	Leu	Gly	Glu	Phe	His	Ala	Phe				
225					230					235					240				
Ile	Val	Ser	Asp	Leu	Arg	Glu	Leu	Gln	Gly	Gln	Ala	Gly	Gln	Cys	Ile				
				245				250						255					
Leu	Leu	Leu	Arg	Ile	Gln	Asn	Pro	Trp	Gly	Arg	Arg	Cys	Trp	Gln	Gly				
			260					265					270						
Leu	Trp	Arg	Glu	Gly	Gly	Glu	Gly	Trp	Ser	Gln	Val	Asp	Ala	Ala	Val				
		275					280					285							
Ala	Ser	Glu	Leu	Leu	Ser	Gln	Leu	Gln	Glu	Gly	Glu	Phe	Trp	Val	Glu				
	290					295					300								
Glu	Glu	Glu	Phe	Leu	Arg	Glu	Phe	Asp	Glu	Leu	Thr	Val	Gly	Tyr	Pro				
305					310					315					320				
Val	Thr	Glu	Ala	Gly	His	Leu	Gln	Ser	Leu	Tyr	Thr	Glu	Arg	Leu	Leu				
				325					330					335					
Cys	His	Thr	Arg	Ala	Leu	Pro	Gly	Ala	Trp	Val	Lys	Gly	Gln	Ser	Ala				
			340				345						350						
Gly	Gly	Cys	Arg	Asn	Asn	Ser	Gly	Phe	Pro	Ser	Asn	Pro	Lys	Phe	Trp				
		355					360					365							
Leu	Arg	Val	Ser	Lys	Pro	Ser	Glu	Val	Tyr	Ile	Ala	Val	Leu	Gln	Arg				
	370					375					380								
Ser	Arg	Leu	His	Ala	Ala	Asp	Trp	Ala	Gly	Arg	Ala	Arg	Ala	Leu	Val				
385					390					395					400				
Gly	Asp	Ser	His	Thr	Ser	Trp	Ser	Pro	Ala	Ser	Ile	Pro	Gly	Lys	His				
				405					410					415					
Tyr	Gln	Ala	Val	Gly	Leu	His	Leu	Trp	Lys	Gly	Val	Thr	Leu	Gly	Thr				
			420					425					430						
Thr	Leu	Phe	Pro	Val	Pro	Ser	Trp	Met	Trp	Pro	Thr								
		435					440												

<210> 11  
 <211> 2516  
 <212> DNA  
 <213> Human  
  
 <400> 11  
 ccgaggcaac cggctgcaga tgggagcccg cggagccgag gatgcgggcg ggccggggcg 60

```

cgacgccggc gagggagctg ttccgggacg ccgccttccc cgccgcggac tcctcgctct 120
tctgcgactt gtctacgccg ctggcccagt tccgcgagga catcacgtgg aggcggcccc 180
aggagatttg tgccacaccc cggctgtttc cagatgaccc acgggaaggg caggtgaagc 240
aggggctgct gggggattgc tggttcctgt gtgcctgcgc cgcgctgcag aagagcaggc 300
acctcctgga ccaggtcatt cctccgggac agccgagctg ggccgaccag gactaccggg 360
gctccttcac ctgtcgcat tggcagtttg gacgctgggt ggaggtgacc acagatgacc 420
gcctgccgtg ccttgccagg agactctgtt tctcccgtg ccagagggag gatgtgttct 480
ggctcccctt actggaaaag gtctacgcca aggtccatgg gtctacgag cacctgtggg 540
ccgggcaggt ggcggatgcc ctggtggacc tgaccggcgg cctggcagaa agatggaacc 600
tgaagggcgt agcaggaagc ggaggccagc aggacaggcc aggcgctgg gagcacagga 660
cttgctcgga gctgctccac ctgaaggacc agtgtctgat cagctgctgc gtgctcagcc 720
ccagagcagg tgcccgggag ctgggggagt tccatgcctt cattgtctcg gacctgcggg 780
agctccaggg tcaggcgggc cagtgcaccc tgctgctgcg gatccagaac ccctggggcc 840
ggcggtgctg gcaggggctc tggagagagg ggggtgaagg gtggagccag gtagatgcag 900
cggtagcatc tgagctcctg tcccagctcc aggaagggga gttctgggtg gaggaggagg 960
agttcctcag ggagtttgac gagctcaccc ttggctaccc ggtcacggag gccggccacc 1020
tgcagagcct ctacacagag aggtgtctct gccatacgcg ggcgctgcct ggggcctggg 1080
tcaagggcca gtcagcagga ggctgccgga acaacagcgg ctttcccagc aaccccaaatt 1140
tctggctgcg ggtctcaaaa ccgagtgagg tgtacattgc cgtcctgcag agatccaggc 1200
tgcacgccgc ggactgggca ggccggggccc gggcactggg gggtgacagt catacttcgt 1260
ggagcccagc gacatccccg ggcaagcact accaggctgt gggtctgcac ctctggaagg 1320
gtgtgacact tggcaccaca ctgttccctg tcccttcatt gatgtggccc acatgatgtt 1380
cctttcctct tgcaaaaagaa gttgctggaa ggccactgt ccagcagccc ccaggttgcc 1440
tgggccacgg tgcccttttg ggcccagcta caaggaggac ttgcaggctc gtgtctggga 1500
cagatactgg cgccagggcc aagtgaagcc cgggattggg agagaagcgg cgggtcaatc 1560
tgcttagggg cctgtccatg cccccctgg ctggcaccgc gtgccatgca tacgaccggg 1620
aggtccacct gcgttgtgag ctctcaccgg gctactacct ggctgtcccc agcaccttcc 1680
tgaaggacgc gccaggggag ttctgtctcc gagtcttctc taccgggcga gtctccctta 1740
gggcccctgg ccccgctgcg tccgcatcac tctgcatcag cactgccggc ccagtgcac 1800
cgagttccac cccatcggtc tccatatctt ccaggtccca gaggggtgaa ggagccagga 1860
cgcaccccca ctgctgctgc aggagccgct ctgagctgc gtgccacatc gctacgcccc 1920
ggaggtgagc cggctctgcc tctgctgc aggcacctac aaggttgtgc cctccacct 1980
cctgccggac acagaggggg ccttcacagt gaccatcgca accaggattg acaggccatc 2040
cattcacagc caggagatgc tgggccagtt cctccaagag gtctccgtca tggcagtgat 2100
gaaaacctaa cagggtggcc ccctgtgcc gctcaggtga ctggagcccc agggcctgac 2160
aggttccccg cagctgggccc ggccagcctt gcaactgtgg ggctggctct gactcttggc 2220
ctgctcccca gccctgccag ggggctgcgg cctaggggtc cacgggaagc ctccgtcagg 2280
agagacgcag ccctgggggc cagctggtgc tgcaaggaag ggtgggaagc ttgctggctt 2340
ctgttgcgcc actgagacgg cagagacccc aggttcccag gatccctccc 2400
agatcctctg ctgactccat atggaggcct cacaccaga gggtagggca gcagatcttc 2460
tttataacta tttattgttc gaatcacttt taggatgtaa ctttataaat aaacct 2516

```

<210> 12  
 <211> 274  
 <212> PRT  
 <213> Human

<400> 12  
 Met Arg Ala Gly Arg Gly Ala Thr Pro Ala Arg Glu Leu Phe Arg Asp  
 1 5 10 15  
 Ala Ala Phe Pro Ala Ala Asp Ser Ser Leu Phe Cys Asp Leu Ser Thr  
 20 25 30  
 Pro Leu Ala Gln Phe Arg Glu Asp Ile Thr Trp Arg Arg Pro Gln Glu  
 35 40 45  
 Ile Cys Ala Thr Pro Arg Leu Phe Pro Asp Asp Pro Arg Glu Gly Gln  
 50 55 60  
 Val Lys Gln Gly Leu Leu Gly Asp Cys Trp Phe Leu Cys Ala Cys Ala

[illegible]

<400> 13							
ccgaggcaac	cggctgcaga	tgggagcccg	cggagccgag	gatgcggggc	ggccggggcg	60	
cgacgccggc	gagggagctg	ttccgggacg	ccgccttccc	cgccgcggac	tcctcgctct	120	
tctgcgactt	gtctacgccg	ctggccagct	tccgcgagga	catcacgtgg	aggcggcccc	180	
aggagatttg	tgccacaccc	cggctgtttc	catagtaccc	acgggaaggg	cagggtgaagc	240	
aggggctgtg	gggggattgc	tgttctctgt	gtgcctgcgc	cgcctgcag	aagagcaggg	300	
acctcttggc	ccaggctcatt	cctccgggac	agccgagctg	ggccgaccag	gagtagccggg	360	
gctccttcac	ctgtcgcatt	tggcagtttg	gacgctgggt	ggaggtgacc	acagatgacc	420	
gcctgccgtg	ccttgcaggg	agactctgtt	tctcccgcgt	ccagagggag	gatgtgttct	480	
ggctccccct	actggaaaag	ggtccatggg	tctacgagc	acctgtgggc	cgggcaggtg	540	
gcggatgccc	tggtggacct	gaccggcggc	ctggcagaaa	gatggaacct	gaagggcgta	600	
gcaggaaagc	gaggccagca	ggacaggcca	ggccgctggg	agcacaggac	ttgtcggcag	660	
ctgctccacc	tgaaggacca	gtgctgatac	agctgtcgcg	tgtctagccc	cagtagcagg	720	
gcccgggagc	tgggggagtt	ccatgccttc	attgtctcgg	acctgcggga	gctccaggg	780	

```

caggcggggcc agtgcatacct gctgctgcgg atccagaacc cctgggggccg gcggtgctgg 840
caggggctctt ggagagaggg ggggtaaggg tggagccagg tagatgcagc ggtagcatct 900
gagctcctgt cccagctcca ggaaggggag ttctgggtgg aggaggagga gttcctcagg 960
gagtttgacg agctcaccgt tggctacccg gtcacggagg ccggccacct gcagagcctc 1020
tacacagaga ggctgctctg ccatacgcg ggcgtgcctg gggcctgggt caagggccag 1080
tcagcaggag gctgccggaa caacagcggc tttccagca accccaaatt ctggctgcgg 1140
gtctcagaac cgagtgaagt gtacattgcc gtcctgcaga gatccaggct gcacgcggcg 1200
gactgggagc gccggggccc ggcactgggt ggtgacagtc atacttcgtg gagcccagcg 1260
agcatcccg gcaagcacta ccaggctgtg ggtctgcacc tctggaaggt agagaagcgg 1320
cgggtcaatc tgcctagggt cctgtccatg cccccgtgg ctggcaccgc gtgcatgca 1380
tacgaccggg aggtccacct gcgttgtag ctctcaccgg gctactacct ggctgtcccc 1440
agcaccttcc tgaaggacgc gccaggggag ttctgtctcc gactcttctc taccgggcga 1500
gtctccctta gcgccatcag ggcagtggcc aagaacacca cccccggggc agccctgcct 1560
gcgggggagt gggggaccgt gcagctacgg ggttcttggg gagtcggcca gacggcgggg 1620
ggcagcagga actttgcctc ataccccacc aaccctgtct tcccccttctc ggtccccgag 1680
ggccctggcc cccgctgcgt ccgcatcact ctgcatcagc actgccggcc cagtacacc 1740
gagttccacc ccacggctt ccatacttcc caggtcccag aggggtggaag gagccaggac 1800
gcacccccac tgctgctgca ggagccgctg ctgagctgcg tgccacatcg ctacgccag 1860
gaggtgagcc ggctctgcct cctgectgca ggcacctaca aggttggtgcc ctccacctac 1920
ctgccggaca cagagggggc cttcacagt accatcgcaa ccaggattga caggccatcc 1980
attcacagcc aggagatgct gggccagttc ctccaagagg tctccgtcat ggcagtgat 2040
aaaacctaac aggggtggcc cctgtgccag ctacagtgac tggagcccga gggcctgaca 2100
ggttcccgag agctggggcc gccagccttg cactgtgggg gctggctctg agtcttggcc 2160
tgctcccgag ccctgccagg gggctgcggc ctaggggtcc acgggaagcc tccgtcagga 2220
gagacgcagc cctggggggc agctggtgct gcaaggaagg gtgggaagct tgctggcttc 2280
tggtgcgcca ctgagacggc agagacccca ggatcccaga gcttcccagg atccctccca 2340
gatcctctgc tgactccata tggaggcctc acaccagag ggtagggcag cagatcttct 2400
ttataactat ttattgttcg aatcactttt aggatgtaac tttataaata aacct 2455

```

<210> 14  
 <211> 139  
 <212> PRT  
 <213> Human

<400> 14

Met	Arg	Ala	Gly	Arg	Gly	Ala	Thr	Pro	Ala	Arg	Glu	Leu	Phe	Arg	Asp
1				5					10					15	
Ala	Ala	Phe	Pro	Ala	Ala	Asp	Ser	Ser	Leu	Phe	Cys	Asp	Leu	Ser	Thr
			20					25					30		
Pro	Leu	Ala	Gln	Phe	Arg	Glu	Asp	Ile	Thr	Trp	Arg	Arg	Pro	Gln	Glu
	35						40					45			
Ile	Cys	Ala	Thr	Pro	Arg	Leu	Phe	Pro	Asp	Asp	Pro	Arg	Glu	Gly	Gln
	50					55					60				
Val	Lys	Gln	Gly	Leu	Leu	Gly	Asp	Cys	Trp	Phe	Leu	Cys	Ala	Cys	Ala
	65				70					75					80
Ala	Leu	Gln	Lys	Ser	Arg	His	Leu	Leu	Asp	Gln	Val	Ser	Cys	Pro	Val
				85					90					95	
Gln	Leu	Pro	Ala	Asp	Trp	Thr	Cys	Lys	Val	Gln	Pro	Val	Trp	Leu	Glu
		100						105					110		
Phe	Pro	Cys	Leu	Pro	Ile	Ser	Cys	Arg	Leu	Arg	Val	Ser	Ser	Asp	Thr
	115						120					125			
Ser	Pro	Asp	Ser	Ala	Thr	Trp	Gly	Ser	Trp	Lys					
	130					135									



<210> 15  
 <211> 1267  
 <212> DNA  
 <213> Human

<400> 15  
 gcggggccct cgggcttga gggctgggccc gggcggggaa cgggcggggc gggccggagg 60  
 cggcgggcgc tgactcgcct tctctccggg gctgcgaccc cgaggcaacc ggctgcagat 120  
 gggagcccgc ggagccgagg atgcggggcg gccggggcgc gacgccggcg agggagctgt 180  
 tccgggacgc cgcttcccc gccgcggact cctcgctctt ctgcgacttg tctacgccgc 240  
 tggcccagtt ccgcgaggac atcacgtgga ggcggcccca ggagatttgt gccacacccc 300  
 ggctgtttcc agatgaccca cgggaagggc aggtgaagca ggggctgctg ggggattgct 360  
 ggttcctgtg tgcctgcgcc gcgctgcaga agagcaggca cctcctggac caggctctct 420  
 gccctgtgca gcttctctgca gactggactt gcaaagtcca gcctgtatgg ctggagtctc 480  
 catgcctgcc aatctcctgt cgactgcgag tcagctccga tacttcacca gattcagcca 540  
 cctgggggag ctggaagtga atctcatctt agctgagcct tctgatgaga ctgcagcccc 600  
 agctgacacc tggattgcag actcatgaaa gacctgaaac tctaccaaca gccacctggg 660  
 ggagctggaa gtgaatctcc tcgtagctga gccttctgat gagactgcag ccccggtga 720  
 cacctggatt gcagactcat gaaagacctg aaactctacc aacagccacc tgggggagct 780  
 ggaagtgaat ctctcgtag ctgagccttc tgatgagact gcagccccgg ctgacacctg 840  
 gattgcagac tcatgaaaga ccctgagcag aggaccaggt ttggcagagc ccgaattcct 900  
 gaccacagg aactgggaga taaaactctg tggttttaat cttctcattt tagaggtaat 960  
 ttttttgtgt agcaataggt agctgacaat gcacagctaa aataatagat aattaaccct 1020  
 aatgctagtt tcattcatcc atcagggttt gcaaagtagt gatattctac ttctgtcttc 1080  
 cttcattatt tattagcaga aatgtatcta taaaaagaag tgttccttca ttaactcttt 1140  
 ggtcatgttg aggtacagtt tgcataggaa aggcagggca aatgcttgat tctttccctt 1200  
 cctttcctca ttataaaaat aatgaactgt tttcctggca tctttcaaca atgactaatg 1260  
 agttttt 1267

<210> 16  
 <211> 138  
 <212> PRT  
 <213> Human

<400> 16  
 Met Arg Ala Gly Arg Gly Ala Thr Pro Ala Arg Glu Leu Phe Arg Asp  
 1 5 10 15  
 Ala Ala Phe Pro Ala Ala Asp Ser Ser Leu Phe Cys Asp Leu Ser Thr  
 20 25 30  
 Pro Leu Ala Gln Phe Arg Glu Asp Ile Thr Trp Arg Arg Pro Gln Val  
 35 40 45  
 Pro Glu Gly Gly Arg Ser Gln Asp Ala Pro Pro Leu Leu Leu Gln Glu  
 50 55 60  
 Pro Leu Leu Ser Cys Val Pro His Arg Tyr Ala Gln Glu Val Ser Arg  
 65 70 75 80  
 Leu Cys Leu Leu Pro Ala Gly Thr Tyr Lys Val Val Pro Ser Thr Tyr  
 85 90 95  
 Leu Pro Asp Thr Glu Gly Ala Phe Thr Val Thr Ile Ala Thr Arg Ile  
 100 105 110  
 Asp Arg Pro Ser Ile His Ser Gln Glu Met Leu Gly Gln Phe Leu Gln  
 115 120 125

0576337.031701

Glu Val Ser Val Met Ala Val Met Lys Thr  
130 135

<210> 17  
<211> 864  
<212> DNA  
<213> Human

<400> 17  
ccgaggcaac cggctgcaga tgggagcccc cggagccgag gatgcgggcg ggccggggcg 60  
cgacgccggc gagggagctg ttccgggacg ccgccttccc cgccgcggac tcctcgctct 120  
tctgcgactt gtctacgccg ctggcccagt tccgcgagga catcacgtgg aggcggcccc 180  
aggtcccaga ggggtggaagg agccaggacg cccccccact gctgctgcag gagccgctgc 240  
tgagctgcgt gccacatcgc tacgcccagg aggtgagccg gctctgcctc ctgcctgcag 300  
gcacctacaa ggttgtgccc tccacctacc tgccggacac agagggggcc ttcacagtga 360  
ccatcgcaac caggattgac aggccatcca ttcacagcca ggagatgctg ggccagttcc 420  
tccaagaggt ctccgtcatg gcagtgatga aaacctaaca ggggtggcccc ctgtgccagc 480  
tcaggtgact ggagcccagag ggcctgacag gttcccagca gctgggcccg ccagccttgc 540  
actgtggggg ctggtcctga gtcttggcct gcctcccagc cctgccaggg ggctgcccgc 600  
taaggggtcca cgggaagcct ccgtcaggag agacgcagcc ctgggggcca gctggtgctg 660  
caaggaaggg tgggaagcct gctggcttct gttgcgccac tgagacggca gagaccccag 720  
gatcccagag cttcccagga tccctcccag atcctctgct gactccatat ggaggcctca 780  
caccagagg gttagggcagc agatcttctt tataactatt tattgttcga atcactttta 840  
ggatgtaact ttataaataa acct 864

<210> 18  
<211> 666  
<212> PRT  
<213> Mus musculus

<400> 18  
Met Arg Ala Val Arg Ala Glu Thr Pro Ala Arg Glu Leu Phe Arg Asp  
1 5 10 15  
Ala Ala Phe Pro Ala Ser Asp Ser Ser Leu Phe Tyr Asn Leu Ser Thr  
20 25 30  
Pro Leu Ala Gln Phe Arg Glu Asp Ile Thr Trp Arg Arg Pro Gln Glu  
35 40 45  
Ile Cys Ala Thr Pro Gln Leu Phe Pro Asp Asn Pro Trp Glu Gly Gln  
50 55 60  
Val Lys Gln Gly Leu Leu Gly Asp Cys Trp Phe Leu Cys Ala Cys Ala  
65 70 75 80  
Ala Leu Gln Lys Ser Gln His Leu Leu Asp Gln Val Phe Pro Pro Gly  
85 90 95  
Gln Pro Gly Trp Ser Asp Gln Lys Tyr Gln Gly Phe Phe Thr Cys Arg  
100 105 110  
Ile Trp Gln Phe Gly His Trp Glu Glu Val Thr Ile Asp Asp Arg Leu  
115 120 125  
Pro Cys Leu Ala Gly Arg Leu Cys Phe Ser Arg Cys Gln Arg Glu Asp  
130 135 140  
Val Phe Trp Leu Pro Leu Leu Glu Lys Ala Tyr Ala Lys Val His Gly  
145 150 155 160

Ser	Tyr	Glu	His	Leu	Trp	Ala	Gly	Gln	Val	Ala	Asp	Ala	Leu	Val	Asp		
				165					170					175			
Leu	Thr	Gly	Ser	Leu	Ala	Glu	Arg	Trp	Ser	Leu	Lys	Asp	Val	Thr	Lys		
			180					185					190				
Ala	Ser	Gly	Gln	Gln	Asp	Arg	Pro	Ser	Gly	Gly	Glu	His	Arg	Thr	Cys		
		195					200					205					
Arg	Gln	Leu	Leu	His	Leu	Lys	Asp	Arg	Cys	Leu	Ile	Ser	Cys	Ser	Val		
		210				215					220						
Leu	Ser	Pro	Arg	Ala	Gly	Ala	Arg	Glu	Leu	Gly	Glu	Phe	His	Ala	Phe		
225					230					235					240		
Ile	Ile	Ser	Asp	Leu	Gln	Glu	Leu	Arg	Ser	Gln	Thr	Gly	Gln	Gly	Ile		
				245					250					255			
Leu	Leu	Leu	Arg	Ile	His	Asn	Pro	Trp	Gly	Arg	Arg	Cys	Trp	Gln	Gly		
			260					265					270				
Leu	Trp	Arg	Glu	Gly	Gly	Glu	Gly	Trp	Asn	Gln	Val	Glu	Pro	Ala	Lys		
		275					280					285					
Glu	Ser	Glu	Leu	Leu	Ala	Gln	Leu	Gln	Glu	Gly	Glu	Phe	Trp	Val	Glu		
		290				295					300						
Glu	Glu	Glu	Phe	Leu	Arg	Glu	Phe	Asp	Glu	Val	Thr	Ile	Gly	Tyr	Pro		
305					310					315					320		
Val	Thr	Glu	Ala	Gly	His	Leu	Gln	Ser	Leu	His	Thr	Glu	Arg	Val	Leu		
				325					330					335			
Cys	His	Thr	Arg	Thr	Leu	Pro	Gly	Ala	Trp	Val	Thr	Gly	Gln	Ser	Ala		
			340					345					350				
Gly	Gly	Cys	Arg	Asn	Asn	Ser	Cys	Phe	Pro	Cys	Asn	Pro	Lys	Phe	Trp		
		355					360					365					
Leu	Arg	Leu	Leu	Glu	Pro	Ser	Glu	Val	Cys	Val	Ala	Val	Leu	Gln	Arg		
		370				375					380						
Pro	Arg	Arg	Arg	Leu	Val	Gly	Gln	Thr	Arg	Ala	Leu	Ala	Gly	Ala	Ser		
385					390					395					400		
Pro	Ala	Pro	Val	Asn	Leu	Pro	Gly	Lys	Asp	Tyr	Gln	Ala	Val	Gly	Leu		
				405					410					415			
His	Ile	Trp	Lys	Val	Glu	Lys	Arg	Lys	Ile	Ser	Leu	Pro	Arg	Val	Leu		
			420					425					430				
Ser	Ala	Pro	Pro	Val	Ala	Gly	Thr	Ala	Cys	His	Ala	Tyr	Asp	Arg	Glu		
		435					440					445					
Ile	His	Leu	Arg	Cys	Glu	Leu	Ser	Pro	Gly	Tyr	Tyr	Leu	Ala	Val	Pro		
		450				455					460						
Ser	Thr	Phe	Leu	Lys	Asp	Val	Pro	Gly	Gln	Phe	Leu	Leu	Arg	Val	Phe		
465					470					475					480		

Phe Thr Gly Lys Ile Ser Leu Ser Ala Val Arg Leu Ala Thr Lys Gly  
485 490 495

Ala Ser Pro Gly Thr Ala Leu Pro Ala Gly Glu Trp Glu Thr Val Gln  
500 505 510

Leu Gln Gly Cys Trp Arg Ala Gly Gln Thr Ala Gly Gly Ser Arg Asn  
515 520 525

Phe Ala Ser Tyr Pro Cys Asn Pro Cys Leu Pro Phe Ser Val Pro Glu  
530 535 540

Gly Ala Gly Pro Arg Tyr Ile Arg Ile Thr Leu Gln Gln His Cys Arg  
545 550 555 560

Leu Ser Asp Ser Gln Leu His Pro Ile Gly Phe His Val Phe Gln Val  
565 570 575

Pro Ala Asp Gly Glu Asn Gln Asp Ala Cys Ser Leu Leu Leu Gln Glu  
580 585 590

Pro Leu Leu Ser Cys Val Pro His Arg Tyr Ala Gln Glu Val Ser Arg  
595 600 605

Leu Cys Leu Leu Ser Val Gly Asn Tyr Arg Ile Val Pro Ser Thr Tyr  
610 615 620

Leu Pro Asp Thr Glu Gly Thr Phe Thr Val Thr Ile Ala Thr Arg Ile  
625 630 635 640

Asp Arg Gln Ser Ile His Ser Gln Glu Met Leu Gly Gln Leu Leu Gln  
645 650 655

Glu Val Ser Phe Met Ala Val Met Lys Ala  
660 665

<210> 19  
<211> 2511  
<212> DNA  
<213> Mus musculus

<400> 19  
agtaggtctc ccgggctaag caaacacggt ttgcaatgaa ggccgcgcac tcgctcccgg 60  
gcggcgaccg agtccacggg ccgcagatgg gagcccaggg cgccgaagat gcgggcggtc 120  
cgggccgaga cgccggcgcg ggagctcttc cgggacgcgg cattccccgc ctcggactcc 180  
tcgctctttt acaacttgtc cacgcctctg gccagtttc gggaggacat cacttggaga 240  
cgaccccagg aaatctgtgc cacacctcag ctgtttccag ataaccatg ggagggacag 300  
gtgaagcaag ggctgctggg agattgctgg ttctgtgtg cctgtgccg ccttcagaag 360  
agtcaacacc tcctggacca ggtcttccct ccaggacagc caggctggc tgaccagaaa 420  
taccaaggct tcttcacctg tcggatttgg cagtttggac actgggagga agtgaccata 480  
gatgatcgtc tgccttgtct tgccgggaga ctctgctttt cccggtgccg gagagaggat 540  
gtgttctggc ttcccttact ggaaaaggcc tatgctaagg tccatggatc gtatgagcac 600  
ctgtgggcag ggcaagtggc agatgcctta gtggatctca ctggaagcct ggcagaaagg 660  
tggagcttga aggatgtaac gaaagccagc ggccagcagg acagaccag tggtggggag 720  
cacagaactt ctgggcagct actccacctg aaggaccggt gtctaatacag ctgctctgtg 780  
cttagcccca gagcaggtgc cagggaactc ggagagtcc atgccttcat catctcagat 840  
ctgcaggagc tcaggagtca gactggccag ggtatcctcc tgctgcggat tcacaacccc 900  
tggggcccggc gttgttggca gggcctctgg agagaaggag gtgaagggtg gaaccaggta 960  
gagccagcta aggagtctga gctgctggcc caactccagg aaggagagtt ctgggtcgag 1020  
gaagaggagt tcctcagggg gtttgatgag gtcaccatcg gctaccagc cacagaggcc 1080

```

ggccacctac agagtctcca cacagagagg gtgctgtgcc atacgcggac actgcctggt 1140
gcctgggtga cagggcagtc agcaggaggc tgccggaaca acagttgctt tccctgcaac 1200
cccaagttct ggttacggct cttggaaccc agcagaggtgt gtgtggctgt tcttcagaga 1260
ccccggaggc gcttagtggg ccagactcgg gcaactggcg gtgccagtcc tgcaccggtg 1320
aacctcccag gcaaagacta ccaggctgtg ggcctgcaca tctggaagg agagaaacgg 1380
aagatcagcc tgcccagagt cctgtctgca cccctgtgg ctggcactgc atgccatgcg 1440
tatgatcgtg agatccactt gcgttgtgag ctctcaccag gctactacct ggccgtccct 1500
agcacctttt tgaaggatgt gccaggcgag ttctgtctca gactcttctt cactgggaaa 1560
atctccctca gtgccgtcag gctggccacc aagggtgcat cgcctggaac agccctgcct 1620
gcaggcgagt gggagactgt gcagttgcag ggctgctgga gagctggcca gacagctggg 1680
ggcagcagga actttgcctc ttacccttgc aatccctgcc tccctttctc tgttccctgag 1740
ggtgctggcc ccgctacat ccgtatcacc ctacagcaac actgccggct cagtgcacag 1800
cagctgcacc ccattggttt ccattgtctt caggttccag cagacggtga gaaccaggac 1860
gcgtgttccc tgctgtctca ggagccactg ctaagctgtg taccacatcg ctacgccag 1920
gaagtgcacc gcctctgcct ctttctgtg gggaactaca ggattgttcc ctccacctac 1980
ctgccagata cagaggggtac cttcacggta accatagcaa ccagaatcga taggcagtcc 2040
atccacagcc aggagatgct gggccagctg ctccaggagg tctcctttat ggcagtgatg 2100
aaagcctgac acgagaccct gtgtgccagc catggccaga gcggtgctg cccctgtgcc 2160
cagcatccag gtgcatctcc agccagctac aagccagctt ctgctcagct ctggaggttg 2220
gctgtggacc ttggggctaa aatagggtgc tttgtcctgg attgaagaca tctcgggtcc 2280
agtgggtgct gcaggcgagg gctagaactc ccaagtggta tcttcattcc ttagtgaagg 2340
ccaggagatt cctggggccc gggtttggtg tggaaagctt tgcagaattc acataacctt 2400
ctcgacttgc gaagccttac actaggcagg cggactgtga caaatgctaa aacctattta 2460
ttacttgaaa tatttttgga atgtgacttt ataaataaac atgaataatt t 2511

```

<210> 20  
 <211> 309  
 <212> PRT  
 <213> Human

<400> 20  
 Met Asn Gly Thr Tyr Asn Thr Cys Gly Ser Ser Asp Leu Thr Trp Pro  
     1                    5                    10                    15  
 Pro Ala Ile Lys Leu Gly Phe Tyr Ala Tyr Leu Gly Val Leu Leu Val  
             20                    25                    30  
 Leu Gly Leu Leu Leu Asn Ser Leu Ala Leu Trp Val Phe Cys Cys Arg  
         35                    40                    45  
 Met Gln Gln Trp Thr Glu Thr Arg Ile Tyr Met Thr Asn Leu Ala Val  
         50                    55                    60  
 Ala Asp Leu Cys Leu Leu Cys Thr Leu Pro Phe Val Leu His Ser Leu  
         65                    70                    75                    80  
 Arg Asp Thr Ser Asp Thr Pro Leu Cys Gln Leu Ser Gln Gly Ile Tyr  
             85                    90                    95  
 Leu Thr Asn Arg Tyr Met Ser Ile Ser Leu Val Thr Ala Ile Ala Val  
         100                    105                    110  
 Asp Arg Tyr Val Ala Val Arg His Pro Leu Arg Ala Arg Gly Leu Arg  
         115                    120                    125  
 Ser Pro Arg Gln Ala Ala Ala Val Cys Ala Val Leu Trp Val Leu Val  
         130                    135                    140  
 Ile Gly Ser Leu Val Ala Arg Trp Leu Leu Gly Ile Gln Glu Gly Gly  
         145                    150                    155                    160

Phe Cys Phe Arg Ser Thr Arg His Asn Phe Asn Ser Met Arg Phe Pro  
165 170 175

Leu Leu Gly Phe Tyr Leu Pro Leu Ala Val Val Val Phe Cys Ser Leu  
180 185 190

Lys Val Val Thr Ala Leu Ala Gln Arg Pro Pro Thr Asp Val Gly Gln  
195 200 205

Ala Glu Ala Thr Arg Lys Ala Ala Arg Met Val Trp Ala Asn Leu Leu  
210 215 220

Val Phe Val Val Cys Phe Leu Pro Leu His Val Gly Leu Thr Val Arg  
225 230 235 240

Leu Ala Val Gly Trp Asn Ala Cys Ala Leu Leu Glu Thr Ile Arg Arg  
245 250 255

Ala Leu Tyr Ile Thr Ser Lys Leu Ser Asp Ala Asn Cys Cys Leu Asp  
260 265 270

Ala Ile Cys Tyr Tyr Tyr Met Ala Lys Glu Phe Gln Glu Ala Ser Ala  
275 280 285

Leu Ala Val Ala Pro Arg Ala Lys Ala His Lys Ser Gln Asp Ser Leu  
290 295 300

Cys Val Thr Leu Ala  
305

<210> 21  
<211> 1875  
<212> DNA  
<213> Human

<400> 21  
caggccagag tcccagctgt cctggactct gctgtgggga agggctgatg caggtgtgga 60  
gtcaaagtgt ggtgcctcct gcagccgggt gccaggagg gtggaggggc caccctgggc 120  
tttgtccggg agcctggtct tcccgctcctt gggctgacag gtgctgctgc ctctgagccc 180  
tccctgctaa gagctgtgtg ctgggtaagg ctgggtggccc ttgtggctcc ctgtccagga 240  
tttgtgctct ggagggtagg gcttgctggg ctggggactg gaggggaacg tggagctcct 300  
tctgcctcct ttctgcccc atgacagcag gcagatccca ggagagaaga gctcaggaga 360  
tggaagagg atctgtccag gggtagacc tcaagggtga cttggagttc tttacggcac 420  
ccatgctttc tttgaggagt tttgtgtttg tgggtgtggg gtcggggctc acctcctccc 480  
acatccctgc ccagaggtgg gcagagtggg ggcagtgcct tgctccccct gctcgctctc 540  
tgctgacctc cggctccctg tgctgcccc ggaccatgaa tggcacctac aacacctgtg 600  
gctccagcga cctcacctgg cccccagcga tcaagctggg cttctacgcc tacttgggcg 660  
tctgtctggt gctaggcctg ctgctcaaca gcttgccgct ctgggtgttc tgctgccgca 720  
tgcagcagt gacggagacc cgcactaca tgaccaacct ggcgggtggc gacctctgcc 780  
tgctgtgcac cttgcccttc gtgctgcact ccctgcgaga cacctcagac acgccgctgt 840  
gccagctctc ccagggcatc tacctgacca acaggtacat gagcatcagc ctggtcacgg 900  
ccatcgccgt ggaccgctat gtggccgtgc ggcaccgcgt gcgtgcccgc gggctgcggg 960  
ccccaggga ggtcgcgcc gtgtgcgcgg tccctgggt gctgggtatc ggctccctgg 1020  
tggctcgctg gctcctgggg attcaggagg gcggcttctg cttcaggagc acccggcaca 1080  
atttcaactc catggcgctt ccgctgctgg gattctacct gcccctggcc gtggtggtct 1140  
tctgctccct gaagggtgtg actgcctgg cccagaggcc acccaccgac gtggggcagg 1200  
cagaggccac ccgcaaggct gcccgcattg tctgggccaa cctcctggtg ttcgtggtct 1260  
gcttccctgcc cctgcacgtg gggctgacag tgccgctcgc agtgggctgg aacgcctgtg 1320  
ccctcctgga gacgatccgt cgcgcctgt acataaccag caagctctca gatgccact 1380  
gctgcctgga cgccatctgc tactactaca tggccaagga gttccaggag gcgtctgcac 1440

tggccgtggc tcccagtgtc aaggcccaca aaagccagga ctctctgtgc gtgaccctcg 1500  
 cctaagaggc gtgctgtggg cgctgtgggc caggtctcgg gggctccggg aggtgctgcc 1560  
 tgccagggga agctggaacc agtagcaagg agcccgggat cagccctgaa ctactgtgt 1620  
 attctcttgg agccttgggt gggcagggac ggcccaggtta cctgctctct tgggaagaga 1680  
 gagggacagg gacaagggca agaggactga ggccagagca aggccaatgt cagagacccc 1740  
 cgggatgggg cctcacactt gccaccccca gaaccagctc acctggccag agtgggttcc 1800  
 tgctggccag ggtgcagcct tgatgacacc tgccgctgcc cctcggggct ggaataaaac 1860  
 tccccaccca gagtc 1875

<210> 22  
 <211> 714  
 <212> PRT  
 <213> Human

<400> 22  
 Met Ser Glu Glu Ile Ile Thr Pro Val Tyr Cys Thr Gly Val Ser Ala  
 1 5 10 15  
 Gln Val Gln Lys Gln Arg Ala Arg Glu Leu Gly Leu Gly Arg His Glu  
 20 25 30  
 Asn Ala Ile Lys Tyr Leu Gly Gln Asp Tyr Glu Gln Leu Arg Val Arg  
 35 40 45  
 Cys Leu Gln Ser Gly Thr Leu Phe Arg Asp Glu Ala Phe Pro Pro Val  
 50 55 60  
 Pro Gln Ser Leu Gly Tyr Lys Asp Leu Gly Pro Asn Ser Ser Lys Thr  
 65 70 75 80  
 Tyr Gly Ile Lys Trp Lys Arg Pro Thr Glu Leu Leu Ser Asn Pro Gln  
 85 90 95  
 Phe Ile Val Asp Gly Ala Thr Arg Thr Asp Ile Cys Gln Gly Ala Leu  
 100 105 110  
 Gly Asp Cys Trp Leu Leu Ala Ala Ile Ala Ser Leu Thr Leu Asn Asp  
 115 120 125  
 Thr Leu Leu His Arg Val Val Pro His Gly Gln Ser Phe Gln Asn Gly  
 130 135 140  
 Tyr Ala Gly Ile Phe His Phe Gln Leu Trp Gln Phe Gly Glu Trp Val  
 145 150 155 160  
 Asp Val Val Val Asp Asp Leu Leu Pro Ile Lys Asp Gly Lys Leu Val  
 165 170 175  
 Phe Val His Ser Ala Glu Gly Asn Glu Phe Trp Ser Ala Leu Leu Glu  
 180 185 190  
 Lys Ala Tyr Ala Lys Val Asn Gly Ser Tyr Glu Ala Leu Ser Gly Gly  
 195 200 205  
 Ser Thr Ser Glu Gly Phe Glu Asp Phe Thr Gly Gly Val Thr Glu Trp  
 210 215 220  
 Tyr Glu Leu Arg Lys Ala Pro Ser Asp Leu Tyr Gln Ile Ile Leu Lys  
 225 230 235 240  
 Ala Leu Glu Arg Gly Ser Leu Leu Gly Cys Ser Ile Asp Ile Ser Ser

"09768677" 09768677



				245						250						255
Val	Leu	Asp	Met	Glu	Ala	Ile	Thr	Phe	Lys	Lys	Leu	Val	Lys	Gly	His	
			260					265					270			
Ala	Tyr	Ser	Val	Thr	Gly	Ala	Lys	Gln	Val	Asn	Tyr	Arg	Gly	Gln	Val	
		275					280					285				
Val	Ser	Leu	Ile	Arg	Met	Arg	Asn	Pro	Trp	Gly	Glu	Val	Glu	Trp	Thr	
	290					295					300					
Gly	Ala	Trp	Ser	Asp	Ser	Ser	Ser	Glu	Trp	Asn	Asn	Val	Asp	Pro	Tyr	
305					310					315					320	
Glu	Arg	Asp	Gln	Leu	Arg	Val	Lys	Met	Glu	Asp	Gly	Glu	Phe	Trp	Met	
				325					330					335		
Ser	Phe	Arg	Asp	Phe	Met	Arg	Glu	Phe	Thr	Arg	Leu	Glu	Ile	Cys	Asn	
			340					345					350			
Leu	Thr	Pro	Asp	Ala	Leu	Lys	Ser	Arg	Thr	Ile	Arg	Lys	Trp	Asn	Thr	
		355					360					365				
Thr	Leu	Tyr	Glu	Gly	Thr	Trp	Arg	Arg	Gly	Ser	Thr	Ala	Gly	Gly	Cys	
	370					375					380					
Arg	Asn	Tyr	Pro	Ala	Thr	Phe	Trp	Val	Asn	Pro	Gln	Phe	Lys	Ile	Arg	
385					390					395					400	
Leu	Asp	Glu	Thr	Asp	Asp	Pro	Asp	Asp	Tyr	Gly	Asp	Arg	Glu	Ser	Gly	
				405					410					415		
Cys	Ser	Phe	Val	Leu	Ala	Leu	Met	Gln	Lys	His	Arg	Arg	Arg	Glu	Arg	
			420					425					430			
Arg	Phe	Gly	Arg	Asp	Met	Glu	Thr	Ile	Gly	Phe	Ala	Val	Tyr	Glu	Val	
		435					440					445				
Pro	Pro	Glu	Leu	Val	Gly	Gln	Pro	Ala	Val	His	Leu	Lys	Arg	Asp	Phe	
	450					455					460					
Phe	Leu	Ala	Asn	Ala	Ser	Arg	Ala	Arg	Ser	Glu	Gln	Phe	Ile	Asn	Leu	
465					470					475					480	
Arg	Glu	Val	Ser	Thr	Arg	Phe	Arg	Leu	Pro	Pro	Gly	Glu	Tyr	Val	Val	
				485					490					495		
Val	Pro	Ser	Thr	Phe	Glu	Pro	Asn	Lys	Glu	Gly	Asp	Phe	Val	Leu	Arg	
			500					505					510			
Phe	Phe	Ser	Glu	Lys	Ser	Ala	Gly	Thr	Val	Glu	Leu	Asp	Asp	Gln	Ile	
		515					520					525				
Gln	Ala	Asn	Leu	Pro	Asp	Glu	Gln	Val	Leu	Ser	Glu	Glu	Glu	Ile	Asp	
	530					535					540					
Glu	Asn	Phe	Lys	Ala	Leu	Phe	Arg	Gln	Leu	Ala	Gly	Glu	Asp	Met	Glu	
545					550					555					560	
Ile	Ser	Val	Lys	Glu	Leu	Arg	Thr	Ile	Leu	Asn	Arg	Ile	Ile	Ser	Lys	
				565					570					575		

His	Lys	Asp	Leu	Arg	Thr	Lys	Gly	Phe	Ser	Leu	Glu	Ser	Cys	Arg	Ser	580	585	590
Met	Val	Asn	Leu	Met	Asp	Arg	Asp	Gly	Asn	Gly	Lys	Leu	Gly	Leu	Val	595	600	605
Glu	Phe	Asn	Ile	Leu	Trp	Asn	Arg	Ile	Arg	Asn	Tyr	Leu	Ser	Ile	Phe	610	615	620
Arg	Lys	Phe	Asp	Leu	Asp	Lys	Ser	Gly	Ser	Met	Ser	Ala	Tyr	Glu	Met	625	630	635
Arg	Met	Ala	Ile	Glu	Ser	Ala	Gly	Phe	Lys	Leu	Asn	Lys	Lys	Leu	Tyr	645	650	655
Glu	Leu	Ile	Ile	Thr	Arg	Tyr	Ser	Glu	Pro	Asp	Leu	Ala	Val	Asp	Phe	660	665	670
Asp	Asn	Phe	Val	Cys	Cys	Leu	Val	Arg	Leu	Glu	Thr	Met	Phe	Arg	Phe	675	680	685
Phe	Lys	Thr	Leu	Asp	Thr	Asp	Leu	Asp	Gly	Val	Val	Thr	Phe	Asp	Leu	690	695	700
Phe	Lys	Trp	Leu	Gln	Leu	Thr	Met	Phe	Ala							705	710	
<210> 23																		
<211> 700																		
<212> PRT																		
<213> Human																		
<400> 23																		
Met	Ala	Gly	Ile	Ala	Ala	Lys	Leu	Ala	Lys	Asp	Arg	Glu	Ala	Ala	Glu	1	5	10
Gly	Leu	Gly	Ser	His	Glu	Arg	Ala	Ile	Lys	Tyr	Leu	Asn	Gln	Asp	Tyr	20	25	30
Glu	Ala	Leu	Arg	Asn	Glu	Cys	Leu	Glu	Ala	Gly	Thr	Leu	Phe	Gln	Asp	35	40	45
Pro	Ser	Phe	Pro	Ala	Ile	Pro	Ser	Ala	Leu	Gly	Phe	Lys	Glu	Leu	Gly	50	55	60
Pro	Tyr	Ser	Ser	Lys	Thr	Arg	Gly	Met	Arg	Trp	Lys	Arg	Pro	Thr	Glu	65	70	75
Ile	Cys	Ala	Asp	Pro	Gln	Phe	Ile	Ile	Gly	Gly	Ala	Thr	Arg	Thr	Asp	85	90	95
Ile	Cys	Gln	Gly	Ala	Leu	Gly	Asp	Cys	Trp	Leu	Leu	Ala	Ala	Ile	Ala	100	105	110
Ser	Leu	Thr	Leu	Asn	Glu	Glu	Ile	Leu	Ala	Arg	Val	Val	Pro	Leu	Asn	115	120	125
Gln	Ser	Phe	Gln	Glu	Asn	Tyr	Ala	Gly	Ile	Phe	His	Phe	Gln	Phe	Trp	130	135	140

Gln	Tyr	Gly	Glu	Trp	Val	Glu	Val	Val	Val	Asp	Asp	Arg	Leu	Pro	Thr	
145					150					155					160	
Lys	Asp	Gly	Glu	Leu	Leu	Phe	Val	His	Ser	Ala	Glu	Gly	Ser	Glu	Phe	
				165					170					175		
Trp	Ser	Ala	Leu	Leu	Glu	Lys	Ala	Tyr	Ala	Lys	Ile	Asn	Gly	Cys	Tyr	
			180					185					190			
Glu	Ala	Leu	Ser	Gly	Gly	Ala	Thr	Thr	Glu	Gly	Phe	Glu	Asp	Phe	Thr	
		195					200					205				
Gly	Gly	Ile	Ala	Glu	Trp	Tyr	Glu	Leu	Lys	Lys	Pro	Pro	Pro	Asn	Leu	
	210					215					220					
Phe	Lys	Ile	Ile	Gln	Lys	Ala	Leu	Gln	Lys	Gly	Ser	Leu	Leu	Gly	Cys	
225				230						235					240	
Ser	Ile	Asp	Ile	Thr	Ser	Ala	Ala	Asp	Ser	Glu	Ala	Ile	Thr	Phe	Gln	
				245					250					255		
Lys	Leu	Val	Lys	Gly	His	Ala	Tyr	Ser	Val	Thr	Gly	Ala	Glu	Glu	Val	
			260					265					270			
Glu	Ser	Asn	Gly	Ser	Leu	Gln	Lys	Leu	Ile	Arg	Ile	Arg	Asn	Pro	Trp	
		275					280					285				
Gly	Glu	Val	Glu	Trp	Thr	Gly	Arg	Trp	Asn	Asp	Asn	Cys	Pro	Ser	Trp	
	290					295					300					
Asn	Thr	Ile	Asp	Pro	Glu	Glu	Arg	Glu	Arg	Leu	Thr	Arg	Arg	His	Glu	
305					310					315					320	
Asp	Gly	Glu	Phe	Trp	Met	Ser	Phe	Ser	Asp	Phe	Leu	Arg	His	Tyr	Ser	
				325					330					335		
Arg	Leu	Glu	Ile	Cys	Asn	Leu	Thr	Pro	Asp	Thr	Leu	Thr	Ser	Asp	Thr	
			340					345					350			
Tyr	Lys	Lys	Trp	Lys	Leu	Thr	Lys	Met	Asp	Gly	Asn	Trp	Arg	Arg	Gly	
		355					360					365				
Ser	Thr	Ala	Gly	Gly	Cys	Arg	Asn	Tyr	Pro	Asn	Thr	Phe	Trp	Met	Asn	
	370					375					380					
Pro	Gln	Tyr	Leu	Ile	Lys	Leu	Glu	Glu	Glu	Asp	Glu	Asp	Glu	Glu	Asp	
385					390					395					400	
Gly	Glu	Ser	Gly	Cys	Thr	Phe	Leu	Val	Gly	Leu	Ile	Gln	Lys	His	Arg	
				405					410					415		
Arg	Arg	Gln	Arg	Lys	Met	Gly	Glu	Asp	Met	His	Thr	Ile	Gly	Phe	Gly	
			420					425					430			
Ile	Tyr	Glu	Val	Pro	Glu	Glu	Leu	Ser	Gly	Gln	Thr	Asn	Ile	His	Leu	
		435					440					445				
Ser	Lys	Asn	Phe	Phe	Leu	Thr	Asn	Arg	Ala	Arg	Glu	Arg	Ser	Asp	Thr	
	450					455					460					

**SECRET**

```

<400> 24
Met  Pro  Thr  Val  Ile  Ser  Ala  Ser  Val  Ala  Pro  Arg  Thr  Ala  Ala  Glu
  1          5          10          15
Pro  Arg  Ser  Pro  Gly  Pro  Val  Pro  His  Pro  Ala  Gln  Ser  Lys  Ala  Thr
          20          25          30
Glu  Ala  Gly  Gly  Gly  Asn  Pro  Ser  Gly  Ile  Tyr  Ser  Ala  Ile  Ile  Ser
          35          40          45

```

Arg 50	Asn	Phe	Pro	Ile	Ile	Gly 55	Val	Lys	Glu	Lys	Thr 60	Phe	Glu	Gln	Leu
His 65	Lys	Lys	Cys	Leu	Glu 70	Lys	Lys	Val	Leu	Tyr 75	Val	Asp	Pro	Glu	Phe 80
Pro	Pro	Asp	Glu	Thr 85	Ser	Leu	Phe	Tyr	Ser 90	Gln	Lys	Phe	Pro	Ile 95	Gln
Phe	Val	Trp	Lys 100	Arg	Pro	Pro	Glu	Ile 105	Cys	Glu	Asn	Pro	Arg	Phe	Ile
Ile	Asp	Gly 115	Ala	Asn	Arg	Thr	Asp 120	Ile	Cys	Gln	Gly	Glu 125	Leu	Gly	Asp
Cys	Trp 130	Phe	Leu	Ala	Ala	Ile 135	Ala	Cys	Leu	Thr	Leu 140	Asn	Gln	His	Leu
Leu 145	Phe	Arg	Val	Ile	Pro 150	His	Asp	Gln	Ser	Phe 155	Ile	Glu	Asn	Tyr	Ala 160
Gly	Ile	Phe	His 165	Phe	Gln	Phe	Trp	Arg	Tyr 170	Gly	Glu	Trp	Val	Asp 175	Val
Val	Ile	Asp	Asp 180	Cys	Leu	Pro	Thr	Tyr 185	Asn	Asn	Gln	Leu	Val	Phe 190	Thr
Lys	Ser	Asn 195	His	Arg	Asn	Glu	Phe 200	Trp	Ser	Ala	Leu	Leu 205	Glu	Lys	Ala
Tyr	Ala 210	Lys	Leu	His	Gly	Ser 215	Tyr	Glu	Ala	Leu	Lys 220	Gly	Gly	Asn	Thr
Thr 225	Glu	Ala	Met	Glu	Asp 230	Phe	Thr	Gly	Gly	Val 235	Ala	Glu	Phe	Phe	Glu 240
Ile	Arg	Asp	Ala 245	Pro	Ser	Asp	Met	Tyr	Lys 250	Ile	Met	Lys	Lys	Ala 255	Ile
Glu	Arg	Gly	Ser 260	Leu	Met	Gly	Cys	Ser	Ile	Asp	Asp	Gly	Thr	Asn	Met
Thr	Tyr	Gly 275	Thr	Ser	Pro	Ser	Gly 280	Leu	Asn	Met	Gly	Glu 285	Leu	Ile	Ala
Arg 290	Met	Val	Arg	Asn	Met	Asp 295	Asn	Ser	Leu	Leu	Gln 300	Asp	Ser	Asp	Leu
Asp 305	Pro	Arg	Gly	Ser	Asp 310	Glu	Arg	Pro	Thr	Arg 315	Thr	Ile	Ile	Pro	Val 320
Gln	Tyr	Glu	Thr 325	Arg	Met	Ala	Cys	Gly	Leu	Val	Arg	Gly	His	Ala 335	Tyr
Ser	Val	Thr	Gly 340	Leu	Asp	Glu	Val	Pro	Phe 345	Lys	Gly	Glu	Lys	Val	Lys
Leu	Val	Arg 355	Leu	Arg	Asn	Pro	Trp 360	Gly	Gln	Val	Glu	Trp 365	Asn	Gly	Ser
Trp	Ser	Asp	Arg	Trp	Lys	Asp	Trp	Ser	Phe	Val	Asp	Lys	Asp	Glu	Lys

370		375		380
Ala Arg Leu Gln His Gln Val Thr Glu Asp Gly Glu Phe Trp Met Ser				
385		390		395 400
Tyr Glu Asp Phe Ile Tyr His Phe Thr Lys Leu Glu Ile Cys Asn Leu				
	405		410	415
Thr Ala Asp Ala Leu Gln Ser Asp Lys Leu Gln Thr Trp Thr Val Ser				
	420		425	430
Val Asn Glu Gly Arg Trp Val Arg Gly Cys Ser Ala Gly Gly Cys Arg				
	435		440	445
Asn Phe Pro Asp Thr Phe Trp Thr Asn Pro Gln Tyr Arg Leu Lys Leu				
	450		455	460
Leu Glu Glu Asp Asp Asp Pro Asp Asp Ser Glu Val Ile Cys Ser Phe				
	465		470	475 480
Leu Val Ala Leu Met Gln Lys Asn Arg Arg Lys Asp Arg Lys Leu Gly				
	485		490	495
Ala Ser Leu Phe Thr Ile Gly Phe Ala Ile Tyr Glu Val Pro Lys Glu				
	500		505	510
Met His Gly Asn Lys Gln His Leu Gln Lys Asp Phe Phe Leu Tyr Asn				
	515		520	525
Ala Ser Lys Ala Arg Ser Lys Thr Tyr Ile Asn Met Arg Glu Val Ser				
	530		535	540
Gln Arg Phe Arg Leu Pro Pro Ser Glu Tyr Val Ile Val Pro Ser Thr				
	545		550	555 560
Tyr Glu Pro His Gln Glu Gly Glu Phe Ile Leu Arg Val Phe Ser Glu				
	565		570	575
Lys Arg Asn Leu Ser Glu Glu Val Glu Asn Thr Ile Ser Val Asp Arg				
	580		585	590
Pro Val Lys Lys Lys Lys Thr Lys Pro Ile Ile Phe Val Ser Asp Arg				
	595		600	605
Ala Asn Ser Asn Lys Glu Leu Gly Val Asp Gln Glu Ser Glu Glu Gly				
	610		615	620
Lys Gly Lys Thr Ser Pro Asp Lys Gln Lys Gln Ser Pro Gln Pro Gln				
	625		630	635 640
Pro Gly Ser Ser Asp Gln Glu Ser Glu Glu Gln Gln Gln Phe Arg Asn				
	645		650	655
Ile Phe Lys Gln Ile Ala Gly Asp Asp Met Glu Ile Cys Ala Asp Glu				
	660		665	670
Leu Lys Lys Val Leu Asn Thr Val Val Asn Lys His Lys Asp Leu Lys				
	675		680	685
Thr His Gly Phe Thr Leu Glu Ser Cys Arg Ser Met Ile Ala Leu Met				
	690		695	700

Asp Thr Asp Gly Ser Gly Lys Leu Asn Leu Gln Glu Phe His His Leu  
705 710 715 720

Trp Asn Lys Ile Lys Ala Trp Gln Lys Ile Phe Lys His Tyr Asp Thr  
725 730 735

Asp Gln Ser Gly Thr Ile Asn Ser Tyr Glu Met Arg Asn Ala Val Asn  
740 745 750

Asp Ala Gly Phe His Leu Asn Asn Gln Leu Tyr Asp Ile Ile Thr Met  
755 760 765

Arg Tyr Ala Asp Lys His Met Asn Ile Asp Phe Asp Ser Phe Ile Cys  
770 775 780

Cys Phe Val Arg Leu Glu Gly Met Phe Arg Ala Phe His Ala Phe Asp  
785 790 795 800

Lys Asp Gly Asp Gly Ile Ile Lys Leu Asn Val Leu Glu Trp Leu Gln  
805 810 815

Leu Thr Met Tyr Ala  
820

<210> 25  
<211> 639  
<212> PRT  
<213> Human

<400> 25  
Met Phe Ser Cys Val Lys Pro Tyr Glu Asp Gln Asn Tyr Ser Ala Leu  
1 5 10 15

Arg Arg Asp Cys Arg Arg Arg Lys Val Leu Phe Glu Asp Pro Leu Phe  
20 25 30

Pro Ala Thr Asp Asp Ser Leu Tyr Tyr Lys Gly Thr Pro Gly Pro Ala  
35 40 45

Val Arg Arg Lys Arg Pro Lys Gly Ile Cys Glu Asp Pro Arg Leu Phe  
50 55 60

Val Asp Gly Ile Ser Ser His Asp Leu His Gln Gly Gln Val Gly Asn  
65 70 75 80

Cys Trp Phe Val Ala Ala Cys Ser Ser Leu Ala Ser Arg Glu Ser Leu  
85 90 95

Trp Gln Lys Val Ile Pro Asp Trp Lys Glu Gln Glu Trp Asp Pro Glu  
100 105 110

Lys Pro Asn Ala Tyr Ala Gly Ile Phe His Phe His Phe Trp Arg Phe  
115 120 125

Gly Trp Val Asp Val Val Ile Asp Asp Arg Leu Pro Thr Val Asn Asn  
130 135 140

Gln Leu Ile Tyr Cys His Ser Asn Ser Arg Asn Glu Phe Trp Cys Ala  
145 150 155 160

Leu Val Glu Lys Ala Tyr Ala Lys Leu Ala Gly Cys Tyr Gln Ala Leu  
 165 170 175  
 Asp Gly Gly Asn Thr Ala Asp Ala Leu Val Asp Phe Thr Gly Gly Val  
 180 185 190  
 Ser Glu Pro Ile Asp Leu Thr Glu Gly Asp Phe Ala Asn Asp Glu Thr  
 195 200 205  
 Lys Arg Asn Gln Leu Phe Glu Arg Met Leu Lys Val His Ser Arg Gly  
 210 215 220  
 Gly Leu Ile Ser Ala Ser Ile Lys Ala Val Thr Ala Ala Asp Met Glu  
 225 230 235 240  
 Ala Arg Leu Ala Cys Gly Leu Val Lys Gly His Ala Tyr Ala Val Thr  
 245 250 255  
 Asp Val Arg Lys Val Arg Leu Gly His Gly Leu Leu Ala Phe Phe Lys  
 260 265 270  
 Ser Glu Lys Leu Asp Met Ile Arg Leu Arg Asn Pro Trp Gly Glu Arg  
 275 280 285  
 Glu Trp Asn Gly Pro Trp Ser Asp Thr Ser Glu Glu Trp Gln Lys Val  
 290 295 300  
 Ser Lys Ser Glu Arg Glu Lys Met Gly Val Thr Val Gln Asp Asp Gly  
 305 310 315 320  
 Glu Phe Trp Met Thr Phe Glu Asp Val Cys Arg Tyr Phe Thr Asp Ile  
 325 330 335  
 Ile Lys Cys Arg Val Ile Asn Thr Ser His Leu Ser Ile His Lys Thr  
 340 345 350  
 Trp Glu Glu Ala Arg Leu His Gly Ala Trp Thr Leu His Glu Asp Pro  
 355 360 365  
 Arg Gln Asn Arg Gly Gly Gly Cys Ile Asn His Lys Asp Thr Phe Phe  
 370 375 380  
 Gln Asn Pro Gln Tyr Ile Phe Glu Val Lys Lys Pro Glu Asp Glu Val  
 385 390 395 400  
 Leu Ile Cys Ile Gln Gln Arg Pro Lys Arg Ser Thr Arg Arg Glu Gly  
 405 410 415  
 Lys Gly Glu Asn Leu Ala Ile Gly Phe Asp Ile Tyr Lys Val Glu Glu  
 420 425 430  
 Asn Arg Gln Tyr Arg Met His Ser Leu Gln His Lys Ala Ala Ser Ser  
 435 440 445  
 Ile Tyr Ile Asn Ser Arg Ser Val Phe Leu Arg Thr Asp Gln Pro Glu  
 450 455 460  
 Gly Arg Tyr Val Ile Ile Pro Thr Thr Phe Glu Pro Gly His Thr Gly  
 465 470 475 480



Glu Phe Leu Leu Arg Val Phe Thr Asp Val Pro Ser Asn Cys Arg Glu  
485 490 495

Leu Arg Leu Asp Glu Pro Pro His Thr Cys Trp Ser Ser Leu Cys Gly  
500 505 510

Tyr Pro Gln Leu Val Thr Gln Val His Val Leu Gly Ala Ala Gly Leu  
515 520 525

Lys Asp Ser Pro Thr Gly Ala Asn Ser Tyr Val Ile Ile Lys Cys Glu  
530 535 540

Gly Asp Lys Val Arg Ser Ala Val Gln Lys Gly Thr Ser Thr Pro Glu  
545 550 555 560

Tyr Asn Val Lys Gly Ile Phe Tyr Arg Lys Lys Leu Ser Gln Pro Ile  
565 570 575

Thr Val Gln Val Trp Asn His Arg Val Leu Lys Asp Glu Phe Leu Gly  
580 585 590

Gln Val His Leu Lys Ala Asp Pro Asp Asn Leu Gln Ala Leu His Thr  
595 600 605

Leu His Leu Arg Asp Arg Asn Ser Arg Gln Pro Ser Asn Leu Pro Gly  
610 615 620

Thr Val Ala Val His Ile Leu Ser Ser Thr Ser Leu Met Ala Val  
625 630 635

<210> 26  
<211> 641  
<212> PRT  
<213> Mus musculus

<400> 26  
Met Gly Pro Pro Leu Lys Leu Phe Lys Asn Gln Lys Tyr Gln Glu Leu  
1 5 10 15

Lys Gln Glu Cys Met Lys Asp Gly Arg Leu Phe Cys Asp Pro Thr Phe  
20 25 30

Leu Pro Glu Asn Asp Ser Leu Phe Phe Asn Arg Leu Leu Pro Gly Lys  
35 40 45

Val Val Trp Lys Arg Pro Gln Asp Ile Ser Asp Asp Pro His Leu Ile  
50 55 60

Val Gly Asn Ile Ser Asn His Gln Leu Ile Gln Gly Arg Leu Gly Asn  
65 70 75 80

Lys Ala Met Ile Ser Ala Phe Ser Cys Leu Ala Val Gln Glu Ser His  
85 90 95

Trp Thr Lys Ala Ile Pro Asn His Lys Asp Gln Glu Trp Asp Pro Arg  
100 105 110

Lys Pro Glu Lys Tyr Ala Gly Ile Phe His Phe Arg Phe Trp His Phe  
115 120 125

Gly Glu Trp Thr Glu Val Val Ile Asp Asp Leu Leu Pro Thr Ile Asn  
130 135 140

Gly Asp Leu Val Phe Ser Phe Ser Thr Ser Met Asn Glu Phe Trp Asn  
145 150 155 160

Ala Leu Leu Glu Lys Ala Tyr Ala Lys Leu Leu Gly Cys Tyr Glu Ala  
165 170 175

Leu Asp Gly Leu Thr Ile Thr Asp Ile Ile Met Asp Phe Thr Gly Thr  
180 185 190

Leu Ala Glu Ile Ile Asp Met Gln Lys Gly Arg Tyr Thr Asp Leu Val  
195 200 205

Glu Glu Lys Tyr Lys Leu Phe Gly Glu Leu Tyr Lys Thr Phe Thr Lys  
210 215 220

Gly Gly Leu Ile Cys Cys Ser Ile Glu Ser Pro Ser Gln Glu Glu Gln  
225 230 235 240

Glu Val Glu Thr Asp Trp Gly Leu Leu Lys Gly Tyr Thr Tyr Thr Met  
245 250 255

Thr Asp Ile Arg Lys Leu Arg Leu Gly Glu Arg Leu Val Glu Val Phe  
260 265 270

Ser Thr Glu Lys Leu Tyr Met Val Arg Leu Arg Asn Pro Leu Gly Arg  
275 280 285

Gln Glu Trp Ser Gly Pro Trp Ser Glu Ile Ser Glu Glu Trp Gln Gln  
290 295 300

Leu Thr Val Thr Asp Arg Lys Asn Leu Gly Leu Val Met Ser Asp Asp  
305 310 315 320

Gly Glu Phe Trp Met Ser Leu Glu Asp Phe Cys His Asn Phe His Lys  
325 330 335

Leu Asn Val Cys Arg Asn Val Asn Asn Pro Val Phe Gly Arg Lys Glu  
340 345 350

Leu Glu Ser Val Val Gly Cys Trp Thr Val Asp Asp Asp Pro Leu Met  
355 360 365

Asn Arg Ser Gly Gly Cys Tyr Asn Asn Arg Asp Thr Phe Leu Gln Asn  
370 375 380

Pro Gln Tyr Ile Phe Thr Val Pro Glu Asp Gly His Lys Val Ile Met  
385 390 395 400

Ser Leu Gln Gln Lys Asp Leu Arg Thr Tyr Arg Arg Met Gly Arg Pro  
405 410 415

Asp Asn Tyr Ile Ile Gly Phe Glu Leu Phe Lys Val Glu Met Asn Arg  
420 425 430

Arg Phe Arg Leu His His Leu Tyr Ile Gln Glu Arg Ala Gly Thr Ser  
435 440 445

Thr Tyr Ile Asp Thr Arg Thr Val Phe Leu Ser Lys Tyr Leu Lys Lys

0976007.001707

450		455		460
Gly Ser Tyr Val Leu	Val Pro Thr Met Phe	Gln His Gly Arg Thr Ser		
465	470	475	480	
Glu Phe Leu Leu Arg	Ile Phe Ser Glu Val	Pro Val Gln Leu Arg Glu		
	485	490	495	
Leu Thr Leu Asp Met	Pro Lys Met Ser Cys	Trp Asn Leu Ala Arg Gly		
	500	505	510	
Tyr Pro Lys Val Val	Thr Gln Ile Thr Val	His Ser Ala Glu Gly Leu		
	515	520	525	
Glu Lys Lys Tyr Ala	Asn Glu Thr Val Asn	Pro Tyr Leu Ile Ile Lys		
	530	535	540	
Cys Gly Lys Glu Glu	Val Arg Ser Pro Val	Gln Lys Asn Thr Val His		
	545	550	555	560
Ala Ile Phe Asp Thr	Gln Ala Val Phe Tyr	Arg Arg Thr Thr Asp Ile		
	565	570	575	
Pro Ile Ile Ile Gln	Val Trp Asn Ser Arg	Lys Phe Cys Asp Gln Phe		
	580	585	590	
Leu Gly Gln Val Thr	Leu Asp Ala Asp Pro	Ser Asp Cys Arg Asp Leu		
	595	600	605	
Lys Ser Leu Tyr Leu	Arg Lys Lys Gly Gly	Pro Thr Ala Lys Val Lys		
	610	615	620	
Gln Gly His Ile Ser	Phe Lys Val Ile Ser	Ser Asp Asp Leu Thr Glu		
	625	630	635	640
Leu				

<210> 27  
 <211> 703  
 <212> PRT  
 <213> RAT

<400> 27  
 Met Ala Ala Leu Ala Ala Gly Val Ser Lys Gln Arg Ala Val Ala Glu  
 1 5 10 15  
 Gly Leu Gly Ser Asn Gln Asn Ala Val Lys Tyr Leu Gly Gln Asp Phe  
 20 25 30  
 Glu Thr Leu Arg Lys Gln Cys Leu Asn Ser Gly Val Leu Phe Lys Asp  
 35 40 45  
 Pro Glu Phe Pro Ala Cys Pro Ser Ala Leu Gly Tyr Lys Asp Leu Gly  
 50 55 60  
 Pro Gly Ser Pro Asp Thr Gln Gly Ile Val Trp Lys Arg Pro Thr Glu  
 65 70 75 80  
 Leu Cys Pro Asn Pro Gln Phe Ile Val Gly Gly Ala Thr Arg Thr Asp

85										90					95				
Ile	Arg	Gln	Gly	Gly	Leu	Gly	Asp	Cys	Trp	Leu	Leu	Ala	Ala	Ile	Ala				
			100					105						110					
Ser	Leu	Thr	Leu	Asn	Glu	Lys	Leu	Leu	Tyr	Arg	Val	Leu	Pro	Arg	Asp				
		115					120					125							
Gln	Ser	Phe	Gln	Lys	Asp	Tyr	Ala	Gly	Ile	Phe	His	Phe	Gln	Phe	Trp				
	130					135					140								
Gln	Tyr	Gly	Glu	Trp	Val	Glu	Val	Val	Ile	Asp	Asp	Arg	Leu	Pro	Thr				
145					150					155					160				
Lys	Asn	Gly	Gln	Leu	Leu	Phe	Leu	His	Ser	Glu	Glu	Gly	Asn	Glu	Phe				
				165					170					175					
Trp	Ser	Ala	Leu	Leu	Glu	Lys	Ala	Tyr	Ala	Lys	Leu	Asn	Gly	Ser	Tyr				
			180					185					190						
Glu	Ala	Leu	Val	Gly	Gly	Ser	Thr	Ile	Glu	Gly	Phe	Glu	Asp	Phe	Thr				
			195				200					205							
Gly	Gly	Ile	Ser	Glu	Phe	Tyr	Asp	Leu	Lys	Lys	Pro	Pro	Glu	Asn	Leu				
	210					215					220								
Tyr	Tyr	Ile	Ile	Gln	Lys	Ala	Leu	Arg	Lys	Gly	Ser	Leu	Leu	Gly	Cys				
225					230					235					240				
Ser	Ile	Asp	Val	Ser	Thr	Ala	Ala	Glu	Ala	Glu	Ala	Thr	Thr	Arg	Gln				
				245					250					255					
Lys	Leu	Val	Lys	Gly	His	Ala	Tyr	Ser	Val	Thr	Gly	Val	Glu	Glu	Val				
			260					265					270						
Asn	Phe	His	Gly	Arg	Pro	Glu	Lys	Leu	Ile	Arg	Leu	Arg	Asn	Pro	Trp				
		275					280					285							
Gly	Glu	Val	Glu	Trp	Ser	Gly	Ala	Trp	Ser	Asp	Asn	Ala	Pro	Glu	Trp				
	290					295					300								
Asn	Tyr	Ile	Asp	Pro	Arg	Arg	Lys	Glu	Glu	Leu	Asp	Lys	Lys	Ala	Glu				
305					310					315					320				
Asp	Gly	Glu	Phe	Trp	Met	Ser	Phe	Ser	Asp	Phe	Leu	Lys	Gln	Tyr	Ser				
				325					330					335					
Arg	Leu	Glu	Ile	Cys	Asn	Leu	Ser	Pro	Asp	Ser	Leu	Ser	Ser	Glu	Glu				
			340					345					350						
Ile	His	Lys	Trp	Asn	Leu	Val	Leu	Phe	Asn	Gly	Arg	Trp	Thr	Arg	Gly				
		355					360				365								
Ser	Thr	Ala	Gly	Gly	Cys	Leu	Asn	Tyr	Pro	Gly	Thr	Tyr	Trp	Thr	Asn				
	370					375					380								
Pro	Gln	Phe	Lys	Ile	His	Leu	Asp	Glu	Val	Asp	Glu	Asp	Gln	Glu	Glu				
385					390					395					400				
Gly	Thr	Ser	Glu	Pro	Cys	Cys	Thr	Val	Leu	Leu	Gly	Leu	Met	Gln	Lys				
				405					410					415					

**09607001**

09763377-081701

<400> 28

Met	Pro	Tyr	Leu	Tyr	Arg	Ala	Pro	Gly	Pro	Gln	Ala	His	Pro	Val	Pro	1	5	10	15
Lys	Asp	Ala	Arg	Ile	Thr	His	Ser	Ser	Gly	Gln	Ser	Phe	Glu	Gln	Met	20	25	30	
Arg	Gln	Glu	Cys	Leu	Gln	Arg	Gly	Thr	Leu	Phe	Glu	Asp	Ala	Asp	Phe	35	40	45	
Pro	Ala	Ser	Asn	Ser	Ser	Leu	Phe	Tyr	Ser	Glu	Arg	Pro	Gln	Ile	Pro	50	55	60	
Phe	Val	Trp	Lys	Arg	Pro	Gly	Glu	Ile	Val	Lys	Asn	Pro	Glu	Phe	Ile	65	70	75	80
Leu	Gly	Gly	Ala	Thr	Arg	Thr	Asp	Ile	Cys	Gln	Gly	Glu	Leu	Gly	Asp	85	90	95	
Cys	Trp	Leu	Leu	Ala	Ala	Ile	Ala	Ser	Leu	Thr	Leu	Asn	Gln	Lys	Ala	100	105	110	
Leu	Ala	Arg	Val	Ile	Pro	Gln	Asp	Gln	Ser	Phe	Gly	Pro	Gly	Tyr	Ala	115	120	125	
Gly	Ile	Phe	His	Phe	Gln	Phe	Trp	Gln	His	Ser	Glu	Trp	Leu	Asp	Val	130	135	140	
Val	Ile	Asp	Asp	Arg	Leu	Pro	Thr	Phe	Arg	Asp	Arg	Leu	Val	Phe	Leu	145	150	155	160
His	Ser	Ala	Asp	His	Asn	Glu	Phe	Trp	Ser	Ala	Leu	Leu	Glu	Lys	Ala	165	170	175	
Tyr	Ala	Lys	Leu	Asn	Gly	Ser	Tyr	Glu	Ala	Leu	Lys	Gly	Gly	Ser	Ala	180	185	190	
Ile	Glu	Ala	Met	Glu	Asp	Phe	Thr	Gly	Gly	Val	Ala	Glu	Thr	Phe	Gln	195	200	205	
Thr	Lys	Glu	Ala	Pro	Glu	Asn	Phe	Tyr	Glu	Ile	Leu	Glu	Lys	Ala	Leu	210	215	220	
Lys	Arg	Gly	Ser	Leu	Leu	Gly	Cys	Phe	Ile	Asp	Thr	Arg	Ser	Ala	Ala	225	230	235	240
Glu	Ser	Glu	Ala	Arg	Thr	Pro	Phe	Gly	Leu	Ile	Lys	Gly	His	Ala	Tyr	245	250	255	
Ser	Val	Thr	Gly	Ile	Asp	Gln	Val	Ser	Phe	Arg	Gly	Gln	Arg	Ile	Glu	260	265	270	
Leu	Ile	Arg	Ile	Arg	Asn	Pro	Trp	Gly	Gln	Val	Glu	Trp	Asn	Gly	Ser	275	280	285	
Trp	Ser	Asp	Ser	Ser	Pro	Glu	Trp	Arg	Ser	Val	Gly	Pro	Ala	Glu	Gln	290	295	300	
Lys	Arg	Leu	Cys	His	Thr	Ala	Leu	Asp	Asp	Gly	Glu	Phe	Trp	Met	Ala	305	310	315	320

0076937 2499760

Phe	Lys	Asp	Phe	Lys	Ala	His	Phe	Asp	Lys	Val	Glu	Ile	Cys	Asn	Leu	
				325					330					335		
Thr	Pro	Asp	Ala	Leu	Glu	Glu	Asp	Ala	Ile	His	Lys	Trp	Glu	Val	Thr	
			340					345					350			
Val	His	Gln	Gly	Ser	Trp	Val	Arg	Gly	Ser	Thr	Ala	Gly	Gly	Cys	Arg	
		355					360					365				
Asn	Phe	Leu	Asp	Thr	Phe	Trp	Thr	Asn	Pro	Gln	Ile	Lys	Leu	Ser	Leu	
	370					375					380					
Thr	Glu	Lys	Asp	Glu	Gly	Gln	Glu	Glu	Cys	Ser	Phe	Leu	Val	Ala	Leu	
385					390				395						400	
Met	Gln	Lys	Asp	Arg	Arg	Lys	Leu	Lys	Arg	Phe	Gly	Ala	Asn	Val	Leu	
				405					410					415		
Thr	Ile	Gly	Tyr	Ala	Ile	Tyr	Glu	Cys	Pro	Asp	Lys	Asp	Glu	His	Leu	
			420					425					430			
Asn	Lys	Asp	Phe	Phe	Arg	Tyr	His	Ala	Ser	Arg	Ala	Arg	Ser	Lys	Thr	
		435					440					445				
Phe	Ile	Asn	Leu	Arg	Glu	Val	Ser	Asp	Arg	Phe	Lys	Leu	Pro	Pro	Gly	
	450					455					460					
Glu	Tyr	Ile	Leu	Ile	Pro	Ser	Thr	Phe	Glu	Pro	His	Gln	Glu	Ala	Asp	
465					470				475						480	
Phe	Cys	Leu	Arg	Ile	Phe	Ser	Glu	Lys	Lys	Ala	Ile	Thr	Arg	Asp	Met	
				485					490					495		
Asp	Gly	Asn	Val	Asp	Ile	Asp	Leu	Pro	Glu	Pro	Pro	Lys	Pro	Thr	Pro	
			500					505					510			
Pro	Asp	Gln	Glu	Thr	Glu	Glu	Glu	Gln	Arg	Phe	Arg	Ala	Leu	Phe	Glu	
		515					520					525				
Gln	Val	Ala	Gly	Glu	Asp	Met	Glu	Val	Thr	Ala	Glu	Glu	Leu	Glu	Tyr	
	530					535					540					
Val	Leu	Asn	Ala	Val	Leu	Gln	Lys	Lys	Lys	Asp	Ile	Lys	Phe	Lys	Lys	
545					550					555					560	
Leu	Ser	Leu	Ile	Ser	Cys	Lys	Asn	Ile	Ile	Ser	Leu	Met	Asp	Thr	Ser	
				565					570					575		
Gly	Asn	Gly	Lys	Leu	Glu	Phe	Asp	Glu	Phe	Lys	Val	Phe	Trp	Asp	Lys	
			580					585					590			
Leu	Lys	Gln	Trp	Ile	Asn	Leu	Phe	Leu	Arg	Phe	Asp	Ala	Asp	Lys	Ser	
		595					600					605				
Gly	Thr	Met	Ser	Thr	Tyr	Glu	Leu	Arg	Thr	Ala	Leu	Lys	Ala	Ala	Gly	
	610					615					620					
Phe	Gln	Leu	Ser	Ser	His	Leu	Leu	Gln	Leu	Ile	Val	Leu	Arg	Tyr	Ala	
625					630					635					640	
Asp	Glu	Glu	Leu	Gln	Leu	Asp	Phe	Asp	Asp	Phe	Leu	Asn	Cys	Leu	Val	

645

650

655

Arg Leu Glu Asn Ala Ser Arg Val Phe Gln Ala Leu Ser Thr Lys Asn  
 660 665 670

Lys Glu Phe Ile His Leu Asn Ile Asn Glu Phe Ile His Leu Thr Met  
 675 680 685

Asn Ile  
 690

<210> 29  
 <211> 29  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 Primer

<400> 29  
 tctcagagtg ggggtgaggct gtgatgggg

29

<210> 30  
 <211> 6  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 Primer

<400> 30  
 aataaa

6

TO 2180 " 081701  
 09768877